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SOME POINTS ON THE DIFFERENTIAL DIAGNOSIS OF FUNCTIONAL AND ORGANIC DISEASES OF THE NERVOUS SYSTEM*

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The subject of organic and functional paralysis of the nervous system has long played a leading role in neurologic diagnosis. Ofttimes, under favorable circumstances, the physician is perplexed as to whether the symptoms complained of by a patient are genuine, as far as the paralysis is concerned, or are of a pseudo-paralytic or non-organic nature. True it is, at times, that even the symptoms and clinical evidence are of such a character as to suggest to the examiner the strongest possibility of malingering on the part of a patient; quite naturally, therefore, it becomes important that those entrusted with the responsibility of passing upon the nature of a paralysis should be in possession of the fundamental facts concerning our knowledge of the nervous mechanism in health, in disease, and in alleged paralytic conditions, that no gross injustice be done either to the patient or to those who may be responsible for the injury with its resultant train of symptoms. As our complexity of social affairs steadily grows from year to year, and man's relationship with man correspondingly assumes greater magnitudes, it is not surprising that the various traumatic injuries producing incapacities have resulted in the legal consideration of the responsibility growing out of the relationship between employer and employe, between the injured person and utility corporations, and between individuals in private walks of life. Ultimately the legal consideration of the responsibility existing between employer and employe, and between private individuals and great public and private corporations, as far as injuries are concerned, is of considerable moment and effects the general public in a manner not well understood, for after all when the smoke and fumes of legal battle are blown from the field and judgment rendered for monies not honestly deserved, the public, the ultimate consumers of all products, like Jones, must and does pay the freight. This is especially true in the final analysis of the workmen's compensation law, for here the producer simply adds to the cost of production that amount of money necessary to cover his cost of caring for his employes or insuring them against injury; and the acquisition of any unjust claims simply increases the already heavy burden now carried by consuming individuals. That the public should be protected against infringement by those claiming permanent injuries as result of accident, which in truth are purely functional in character, thus becomes apparent, and to this end the physician serves humanity best when he endeavors to place the truth before those who must make the legal decision and regulate all compensatory measures. With these brief preliminary remarks, let us now turn our attention to a consideration of the subject matter proper.

The commonest objective symptom complained of following injury, from a neurologic point of view, is that of paralysis. It behooves us, therefore, to briefly consider some of the anatomico-physiologic facts concerning the nervous mechanism that our conception and interpretation of clinical evidence may be the more accurate and reliable.

Many years ago the neuron theory was advanced, which theory, since substantiated by many known facts, still remains today and holds good for our present conception of the mechanism of the nervous system. Briefly, it will be recalled, a neuron consists of a nerve cell with its dendrites, a main projecting fibre or axis-cylinder, collaterals, and end tufts. Such a cell, arising from the convolution just anterior to the Rolandic fissure of the brain, gives rise to motor impulses, which in turn are conveyed over the projecting fibre passing downward through the centrum ovale, the anterior two-thirds of the posterior limb of the internal capsule, the crus, the pons, and the medulla, where decussation of groups of

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fibres take place, 90 per cent crossing the median line to pass downward through the lateral column of the spinal cord as the crossed pyramidal tract where ultimately the end-tufts end in an arborescent arrangement about the cells in the anterior cornu on the same side; 10 per cent continuing downward as the direct pyramidal tract in the anterior aspect of the cord only to cross over through the anterior white commissure to similarly end about the cells in the anterior cornu of the opposite side. The fibres, arising from the cortical cells in the motor area of the brain, thus form the pathways—direct and indirect—by which impulses are transmitted from the brain to the multipolar motor cells in the anterior horns of the cord; and such systems are spoken of as the upper motor pathways, upper motor neurons, corticospinal neurons. On the other hand, the multipolar cells forming the gray matter in the anterior horns of the spinal cord give rise to axis-cylinders which pass outward from the cord substance and, uniting with sensory fibres coming from the posterior horns of the cord, form the spinal nerves, which, dividing into anterior and posterior branches, ultimately end in the musculature and various tissues of the body. A motor cell with its fibre, as just described, helps to form the lower motor segment and is referred to as the lower motor neuron, the lower motor pathway, the spinomuscular neuron. Thus the two great motor systems, while connected, are nevertheless distinct and separate nerve entities, and, whether belonging to the motor cranial nerves or to the spinal apparatus, these systems give origin to certain distinct clinical findings when their function is interfered with through disease or injury.

Let us now briefly consider the clinical findings when the corticospinal pathway is involved. Clinical experience, backed by anatomico-pathologic evidence, long ago firmly established the fact that certain very definite and distinct neurologic findings resulted from lesions involving either the cells or fibres composing the upper motor pathway. Hastily reviewing these findings we note that first of all motor paralysis, to a greater or lesser degree, results from such a lesion, a paralysis which involves diffuse and not individual muscle groups. As a result of the liberation of some restraining influence normally exerted by an intact upper motor pathway on the cells in the anterior horns of the cord, the paralytic muscles in time become spastic or hypertonic. As a result of this hypertonicity the tendon reflexes are increased and ofttimes markedly exaggerated, and a well sustained ankle clonus may be elicited when the leg fibres are involved. There may be also superadded "associated movements" or synkinesiæ on attempted voluntary movement of muscles. There is no atrophy of muscles except that arising from disuse. Electrical reactions are all normal. And when the foot is affected, the plantar response is extensor or pathologic in type. Thus we have in the consideration of a lesion involving some portion of the corticospinal pathway a group of clinical findings, most or all of which may be present in a given instance.

TABLE I

Upper Motor Neuron (Corticospinal) Lesions Produce

1. Paralysis of diffuse muscle groups.
2. Hypertonicity or spasticity of paralyzed muscles.
3. Preserved or increased tendon reflexes.
4. Clonus of muscles ofttimes.
5. Associated movements (synkinesiae).
6. Normal electrical reactions.
7. No atrophy except from disuse.
8. Extensor or pathologic toe signs.

On the other hand, lesions involving the spinomuscular pathway or lower motor neurons give rise to a symptom group which has nothing in common with the symptoms above enumerated except that of motor paralysis. Here the resultant paralysis is of a flaccid or flail-like character; individual muscles may be affected; there is an absence of associated movements; atrophy of paralyzed muscles result, due to trophic disturbances; the electrical reactions of degeneration may be present; the deep or tendon reflexes are diminished or lost; and the plantar reflex, if preserved, is of the normal flexor type.

TABLE II

Lower Motor Neuron (Spinomuscular) Lesions Produce

1. Paralysis—ofttimes of individual muscles.
2. Hypotonicity or flaccidity of paralyzed muscles.
3. Diminished or absent tendon reflexes.
4. No clonus.
5. No associated movements.
6. Electrical reactions of degeneration.
7. Atrophy due to trophic disturbance.
8. Plantar flexion of toes, if preserved.

Thus ofttimes it can be determined after a rather cursory examination whether a given lesion involves some portion of the upper motor pathway or whether it involves some portion of the lower pathway. True it is, at times, a diseased condition may involve simultaneously both motor systems, as is well known in amyotrophic lateral sclerosis, but here sufficient neurologic evidence is always present to such a degree that no question need arise as to whether the lesion is organic or functional in type.

With this brief consideration of the motor pathways—both upper and lower—let us now turn our attention to some of the more important skin reflexes and to their evaluation as diagnostic aids. It has long been recognized that the abdominal and, in a male subject, the cremasteric reflexes are diminished or lost on the affected side in individuals suffering from a true hemiplegic state. While in elderly men the cremasteric response may be sluggish or absent when the skin along the inner surface of the thigh is stroked, not infrequently a good response will result by making firm pressure on the thigh muscles, particularly in the region of Hunter's canal, or over the adductor tubercle of the femur. Likewise the abdominal reflex may be absent in those individuals whose belly walls are heavy with adipose, or relaxed as following the parturient state, or as a result of loss of adipose. In young adults, the loss of the abdominal reflex is at least suggestive of a disseminated sclerosis, providing the abdominal walls are normal and no acute process like appendicitis or enteric fever is present. The absence of these superficial reflexes should be an incentive for the examiner to look farther for corroborative evidence as to the existence of an organic lesion, for while these reflexes may be diminished in functional disorders, their absence in toto on one or both sides should always be linked with some condition due to a lesion involving the central nervous mechanism.

Of all the superficial reflexes, by far the most important are those known as toe signs. Ordinarily, when the skin of the plantar surface of the foot is irritated by drawing some foreign object along the sole from behind forward, or stroking the ball of the foot, prompt plantar flexion of the toes ensues. Should the stimulation be too strong, contraction of the tensor fasciæ femoris, dorsi-flexion of the ankle and even partly voluntary movements may take place, thus obscuring the involuntary movement of the toes.

For this reason it is necessary to use care, when endeavoring to elicit this reflex, to apply a stimulus just sufficient to produce toe movements, and nothing more. This reflex, which is purely flexor in type, occurs only when the reflex arc is intact and when there is no irritation or interruption of the corticospinal element of the central nervous system supplying motor impulses to the lower extremity. The fact that the governing influence of the upper motor neuron is necessary in order that the reflex be flexor in type, thus making it in one sense a cortical reflex, is a neurologic axiom, for Babinski, the noted French neurologist, over a quarter of a century ago, pointed out to the profession that in lesions involving the upper motor pathway, especially the pyramidal tracts, plantar stimulation produced extension instead of flexion of the toes, particularly of the great toe. The extensor movement of the great toe is somewhat slower than in normal flexion, and sometimes the remaining digits separate, as it were, assuming a fan-shape appearance. Babinski's extensor toe reflex never occurs in health, except in infancy before the tracts have become myelinated, and is one of the most valuable signs at our disposal in differentiating between the so-called functional and organic lesions of the nervous system.

Shortly after Babinski's report, Oppenheim, from the German neurological school, ascertained that extension of the great toe could also be produced in lesions involving the leg center or fibres by firmly stroking the skin along the tibial borders, especially the postero-internal border, from above downward at about the junction of the middle and lower thirds. Such a stimulus many times produces a contraction of the extensor longus hallucis and the tibialis anticus muscles when the leg fibres are implicated.

In 1904, Gordon of Philadelphia found that by making firm pressure through the calf muscles onto the deep flexors beneath, extension of the great toe, or of all the toes, ofttimes resulted when organic motor disease was present.

In 1910, while serving my internship in the Philadelphia Orthopoedic Hospital and Infirmary for Nervous Diseases, I found that the extensor toe reflex could likewise be produced, in many instances of organic involvement, by percussing the skin overlying the upper surface of the first metatarso-phalangeal articulation.[1] The percussion method I long ago abandoned inasmuch as stroking the skin along the upper or inner surface of the great toe proved just as efficacious and was not quite so uncomfortable a means of securing stimulation. That this reflex has been given a place in neurologic nosology has been borne out by many confirmatory reports by various clinicians as well as its inclusion in works on neurologic diagnosis.[2]

Chaddock of St. Louis in 1911 was the next to report on a new method for eliciting an extensor toe sign. This observer found that by gently stimulating the skin beneath the external malleolus, extension of the great toe, or at times fanning of the outer digits, ofttimes resulted when upper motor irritation or disease was present.

The last American neurologist, as far as I know, who added anything to the methods now in vogue for eliciting pathologic toe signs is Leo Crafts of Minneapolis. Here, according to

FIGURE 1. Author's method of eliciting extensor toe sign.

Craft's method, the skin is stimulated by drawing a sharp object over the dorsal surface of the foot and ankle from below upwards, producing in many instances extension of the great toe.

The Mendel-Bechterew phenomenon only occurs in organic lesions of the pyramidal tract. Here, percussion over the dorsum of the foot, especially in the region of the cuboid bone, causes a flexor movement of the toes, whereas normally, extension of the four outer toes results due to stimulation of the extensor brevis digitorium. Rossolimo's sign of pyramidal tract disease consists in a similar sudden flexion movement of the toes, induced by their previous extension, caused by striking on their plantar surface.

Before passing for the moment from our consideration of the various pathologic toe signs and their method of elicitation, it may be well to state that any one, or any number, or even all, of these signs may be elicited in the same patient, and when found are indicative of but one thing; namely, irritation or disease of the corticospinal element of the central nervous system. While without question the Babinski toe sign stands as classic of its kind, it is comforting to know that other means are at our disposal in confirming the presence of irritative or destructive lesions of the upper motor pathway, and that the possibility of an individual simulating all the known pathologic toe signs is thus reduced to a minimum—for we know that in numbers there is strength.

So far we have considered the motor pathways, both upper and lower, the clinical findings produced when these pathways become irritated or diseased, and the manner in which pathologic toe signs are elicited. Let us now turn our attention to a consideration of the functional side of our nervous problem and endeavor to better understand some of the fundamental or basic elements entering into the make-up of those individuals who are prone to develop those symptoms spoken of as traumatic neurosis, traumatic-neurasthenia, traumatic hystero-neurasthenia, or better still as traumatic hysteria.

It has long been known to alienists that certain individuals are more prone to mental breakdown than are others. Usually a bad neuropathic or psychopathic background is discovered in such individuals thus showing that fundamentally a marked instability of the nervous mechanism is present. What is true of the real psychoses also holds for the psychoneuroses, so-called, of which hysteria heads the list. When we come to analyze the elements entering into the composition of the hysteric we find that, like the poet, he is born and not made. In other words, "hysteria is an affection which is innate in the individual". Starting with this premise, which observers from Charcot's time down to the present do not dispute, let us consider some of the factors which bring the hysterical tendency from the background to the front. It may not be amiss to here state that not every individual, who possesses the make-up necessary for the development of hysteria, exercises that God given prerogative. Such a one, without question, has no knowledge of his nervous instability. It clearly can do no violence to the facts to assume that something of an extraneous origin or nature must come in contact with such an individual before the outward expressions of an hysterical state can come into being. What then may be said to be perhaps the most significant of all these extraneous causes? The answer, I feel, is a simple one. Clinical experience has shown that suggestion, fright, shock or other emotional factors are the origin of the symptoms complained of by the hysteric. As my old master Dercum has well said, "it is the pathologic vulnerability to suggestion which constitutes hysteria".[3] That suggestion does play the leading role as a causal factor can be proven in a number of ways.

For instance, take the sensory changes—the anesthesias—so often observed in the hysterical state. The glove—or stocking-like anesthesia; the abrupt ending of the anesthetic line near the shoulder or hip in cases of hysterical monoplegia; the sharply defined line of anesthesia running down the median line of the head and trunk in cases of hysterical hemianesthesia; all these are clinical facts well known in medicine for years and yet, anatomically speaking, such anesthetic areas are absolutely incompatible with known physiologic nerve distribution and point conclusively to the undisputable fact that such losses of sensation are within the mental, and entirely outside of the physical, realm. Clearly it is that these sensory losses are the outgrowth of an idea,

of a suggestion, which has led the individual to believe that such changes are supposed to be present and to assume such distributions. To further elucidate this point it may be interesting to note that Babinski, in testing out many cases of hysteria, not previously examined, failed to elicit sensory losses in a single instance, unless by suggestion in his manner of examination he conveyed to the patient the inference that sensory changes were being sought for. In other words, when suggestion is avoided, loss of sensation is not observed; and it clearly behooves the examiner to be on his guard if he is to avoid this pitfall so often encountered by those who ignore this law. Just as suggestion can and does bring about hysteria, so has clinical experience often proven that suggestion can and does bring about its cure.

Just as the sensory phenomena are unmistakably the out-croppings of a distorted mental reaction in the hysterically pre-disposed, so may those phenomena referred to the motor mechanism be so considered, for here again the existing phenomena cannot be referred to an organic lesion; they cannot be explained by any of the known facts of anatomy. In hysteria, the individual fully believes that his extremity is paralyzed, that his arm and leg are useless, as in the organically affected; and ofttimes it is, especially where a monoplegia exists, that sensory losses—anesthesia – is an associated factor. Strange to say, however, individual muscles are never paralyzed, the entire segments of the extremity being equally involved; whereas, it is well known in organic lesions, the distal portions are the parts always the more involved, the proximal parts suffering less from the spastic changes. Again, wonderful to relate, in those cases suffering from the functional hemiplegic state, in which sensory phenomena may or may not be associated with motor weakness or loss, the lower quadrant of the face on the affected side is never weakened; a true Bell's palsy is never seen; and the tongue, if implicated, curves or deviates, not to the affected side as is the case in organic hemiplegia in which the motor fibres to the tongue are involved, but to the opposite or sound side. Here, also, we find that the gait only superficially resembles that of organic hemiplegia. Usually the extremity is held in a somewhat stiffened manner or, if the palsy be of the flaccid type, is dragged along in walking as though it were helpless and dead, the dorsum of the foot and toes scraping along the ground or floor. Sometimes the limb is shoved in advance of the patient as he walks, in marked contrast to the peculiar side-swing of the truly palsied leg, the so-called scythe-swing which one can so readily demonstrate in the true hemiplegic gait. Why this difference of muscular movement occurs can be understood when we recall that in organic paralysis, as before mentioned, the distal parts of an affected extremity are more involved than are the proximal, hence the swing of the palsied leg depends largely on the muscular contraction of the weakened hip muscles. In contrast to this we find, in hysteria, that the musculature of an affected extremity is equally involved, there being no appreciable difference between the distal and proximal weakness. Further examination of the involved extremities reveals the preservation of the deep or tendon reflexes; they are never lost in the hysteric, but may be concealed or diminished by contractures if any be present. Muscular wasting may have occurred, due, not to trophic changes, but to disuse. Electrical responses are of the normal type, reactions of degeneration being found only where organic changes in some portion of the spinomuscular pathway have taken place, a condition never found in the hysterical state and, needless to say, one which cannot be produced by simulation. In other words, if muscular atrophy be present it is always unassociated with electrical changes indicative of nerve degeneration. In those cases resembling the spastic state, a spurious or pseudo-patellar or pseudo-ankle clonus can often be elicited, a clonus which is not the sustained clonus of an organic lesion and is one in which extensor toe phenomena are never associated. While it is true that some of the pathologic toe signs, always indicative of organic irritation or disease along some part of the leg fibres of the corticospinal pathway, may be simulated by an hysterical patient in whose presence the subject has been discussed or who has been coached by some unscrupulous physician, still it is well to remember that usually in the organic state more than one extensor toe sign can be elicited in a given case and the likelihood of a patient being familiar with more than one sign, usually the Babinski, is highly improbable. Therefore, it is always well in a case where simulation is suspected for the examiner to run the entire series of tests, conscious of the fact that the patient can scarcely be cognizant of all the methods now in use, and his ability to simulate all known pathologic toe signs is therefore highly improbable.

TABLE III

Motor Phenomena Characteristic of Functional Paralysis

1. Paralysis may be flaccid or pseudo spastic.
2. Segments of extremity are equally affected.
3. Reflexes never lost, but may be diminished or concealed if contracture is present.

4. A false or spurious clonus may be present.
5. Associated movements are absent.
6. Atrophy only from disuse.
7. Normal electrical reactions.
8. Extensor or pathologic toe signs never present unless simulated.

If we bear in mind the fact that lesions involving the spinomuscular pathway produce very definite clinical symptoms which are impossible of wilful reproduction on the part of the patient, the likelihood of error as to whether a motor palsy is organic or functional, in a given instance, is reduced to the zero point. For instance, try as hard as he may, the hysteric cannot simulate the trophic changes of a bed sore with its sloughing base, or the sphincter paralysis following a spinal cord lesion. True, suggestion on the part of someone may be sufficient to cause the voluntary passing of urine and feces or even self-inflicted wounds with resultant secondary infection may grossly resemble trophic sores, but the involuntary phenomena, resulting from organic changes, are, needless to say, never met with in the hysterical state. On the other hand, lesions involving the corticospinal pathway, while giving origin to just as definite a group of clinical symptoms, nevertheless, lend themselves more readily to a spurious reproduction by the hysteric, and, as such to the untrained, may seem to be really due to structural, rather than to functional, changes. Likewise, it behooves the examiner to ever be on the lookout for a combination of organic and functional symptoms occurring in the same individual, for it has been demonstrated, time after time, that an hysterical state can be readily grafted on a previously existing organic disease, provided of course the patient has the essential "make-up" in his nerve soil so necessary for the growth of the seed of suggestion.

It may not be out of place to here make reference to something which every examiner, of any experience at all, has noted in coming in contact with persons suffering from injuries, real and alleged. I refer to the attitude which the patient assumes in his endeavor to cooperate with the examining physician. The individual suffering from a true organic lesion, if still in possession of his mental faculties, willingly cooperates to the best of his ability while the examination is in progress. Without exception this is the universal rule. Likewise the hysteric, if uncontaminated by the polluting influence which is usually secondary to the hope of monetary gain, usually enters into the spirit of the examination in a whole-hearted manner. In fact the willingness of such a patient to undergo examination oftimes unconsciously influences the physician to believe that such a person is actually suffering from a lesion producing results which seem to be permanent in character. If, however, after many examinations by his local physician, perhaps augmented by counsel from a specialist, the symptoms of the patient seem to become accentuated, perhaps savoring of certain evidence seemingly pointing to reactions pathologic in character, such are not to be wondered at when we know that underlying the whole array of nervous symptoms is a mechanism which is "pathologically vulnerable to suggestion". True the hope of monetary reward often keeps alive the smouldering embers of the hysteric's symptoms, or fans them at times into a furious flame or even causes him to loudly bemoan his fate; but experience has amply shown, time after time, that the hope of financial gain is entirely absent and has nothing to do with the symptoms presented by the hysteric. On the other hand, the attitude maintained by the malingerer is, from the very beginning, one which should arouse the examiner's suspicion, for here the whole atmosphere usually teems with resentment and the patient, on the defensive from the start, ofttimes is unusually loud in his denunciations of the examiner and of the abuse to which he is being subjected due to the efforts being made to arrive at a just and scientific conclusion.

Again, when a lower extremity is palsied either organically or functionally, tests, other than those already mentioned, are still at our disposal to further aid in elucidating the diagnostic enigma thus presented. When the paralysis is organic, Babinski's combined flexion of the hip and trunk phenomenon may be of especial help. To elicit this, the patient is caused to lie flat on his back on a firm smooth surface with his arms folded across his chest and his lower extremities extended and separated. The examiner then asks the patient to assume the sitting posture without using the arms as aids. In counterdistinction, the heel of the non-paralytic extremity becomes firmly pressed against its supporting surface while the shoulder on the unaffected side is carried forward so as to counterpoise the contralateral elevated paralytic lower limb. Needless to state, in hysterical hemiplegia, this sign is absent, the functionally paralyzed limb remaining unraised while the shoulders come forward in equal fashion as the trunk is flexed on the hips.

Another very useful adjuvant to neurologic diagnosis is that of Hoover's sign.[5] In 1908, C. F. Hoover of Cleveland described a new sign for the detection of malingering and functional paresis of the lower extremities. Hoover observed that if a normal person, lying in a dorsal position, at-

tempted to lift one of the lower extremities while extended, the heel of the opposite extremity tended to be forced downward in an endeavor to counterbalance the lifting effort expended in the elevation of the opposite leg. If the hand of the observer was placed beneath the Achilles tendon of one extremity and the opposite leg elevated while extended, it was found that the muscular resistance offered by the passive extremity equaled that necessary to elevate the opposite leg. In patients suffering from organic motor paresis of one lower extremity, it was found, when effort was made to elevate the extended and palsied member, that the opposite and unaffected leg made counterpressure downward, whether or not any voluntary muscular strength was exhibited on the affected side. When the paralysis was of an hysterical nature, certain very marked departures from these findings took place. When the non-affected leg was elevated, a downward thrust of the heel of the functionally paralyzed limb was plainly felt against the examiner's hand, whereas, apparent attempts to elevate the paretic leg were fruitless, and, strange to say, were not accompanied by any appreciable downward thrust by the normal heel.

Realizing the value of Hoover's observations, and believing that considerable confusion no doubt arose at times owing to the fact that no visible means was at hand whereby the examiner could accurately measure the downward pressure expended by the non-elevated leg, I found, after considerable experimentation, that the use of the sphygmomanometer apparatus could be used with ease in recording the amount of the downward thrust by the passive limb, thus removing all uncertainty as to any difference of pressure that might exist between the two extremities.[4] In making the test the following procedure is essential:

The patient is caused to lie flat on his back with the lower extremities extended. The arm band of the sphygmomanometer apparatus is then placed under one heel, and, after the recording dial has been attached, air is introduced. In order to obviate the possibility of the calf muscles coming in contact with the bed, couch or extended chair, usually a book or other firm object is placed beneath the arm band to elevate the leg sufficiently. The air pressure in the arm band is now increased until the upper and lower surfaces of the cuff are separated to such an extent that downward pressure with the heel will not bring the two surfaces into apposition, thus assuring that the heel will always be resting on an air cushion. The amount of air necessary to bring this about is usually found to be sufficient for adults when the recording hand of the instrument reaches 30 mm. With the heel resting on the air cushion, the leg entirely free from contact with the bed, and the starting point on the dial observed, the patient is instructed to raise the opposite leg, *while keeping the extremity extended,* to an angle of about forty-five degrees with the body. The maximum excursion of the recording hand, particularly the point at which the downward pressure of the heel sustains the hand, is then noted. Usually it is well to repeat the test a time or two to make sure that the readings show no great variation. Variations will sometimes occur if the patient does not fully relax the muscles of the extremity to be elevated. Especially will variation occur if the elevated limb is not kept extended while raised to such an angle—usually forty-five degrees—as to force the expenditure of much muscular action in overcoming the force of gravitation. After the reading has been taken on one side, the air cushion is placed beneath the opposite heel. Here, for several reasons, the starting point may be found different than was the one used in trying out for the first set of readings. If too low, more air is introduced; if too high, the release valve is opened and sufficient air allowed to escape until

Figure 2. Position of patient with syphygmomanometer in place beneath the right heel. Extremity is elevated sufficiently to clear the leg muscles from contact with the horizontal surface.

FIGURE 3. Manner of elevating the opposite extremity, with leg fully extended. The absence or presence of any complemental contralateral pressure can thus be determined and the amount visualized by means of the recording dial.

the starting point is uniform. In normal persons, i. e., when no paralysis of the extremities exists, the readings on the two sides are, for all practical purposes, one and the same, clearly demonstrating that Hoover was correct when he asserted that an equal amount of pressure was made downward by the non-active leg as was necessary to elevate the active limb.

In cases of organic motor paralysis of a lower extremity, it is usually best to first test out the non-affected leg by resting the heel of the palsied extremity on the air cushion while the normal extremity is voluntarily caused to be elevated. The procedure is then reversed, and the readings compared. Differences will occur in the readings largely in proportion to the extent of the paralysis. Owing to the patient's inability to fix the hip muscles on the affected side the downward thrust by the palsied member will be reduced, whereas, elevation of the paretic limb will invariably cause a greater downward thrust by the sound heel, with a correspondingly higher reading. Where the paralysis is slight or partial, the variation between the readings is correspondingly decreased, whereas, almost total or complete paralysis will produce the greater variance, due to the fact that the patient will unconsciously fix the muscles of the sound extremity in an honest endeavor to raise the paralytic limb, thus producing the maximum downward pressure by the sound heel.

The perverted use of the sphygmomanometer, if I may so use the expression, thus far has been described in demonstrating the equality of the contralateral pressure in normal individuals, and the inequality which exists when one extremity is organically paralyzed.[6] The greatest advantage, perhaps, comes in its use as an objective means of proving the existence of a functionally palsied leg. Quite naturally the hysteric willingly elevates the sound limb when so directed, but in so doing he unconsciously makes a counter thrust downward by the heel of the affected side. When directed to elevate the palsied extremity, however, no fixation of the muscles occurs in the sound limb, with the result that but the slightest downward thrust, appreciable only by a meager movement of the recording hand on the air gauge, takes place. In fact, quite commonly the patient, in his endeavor to apparently comply with the examiner's demands that the paralytic leg be raised, elevates slightly the non-affected extremity, thus producing a minus reading. While to Hoover belongs the credit of first calling the profession's attention to differences in complemental thrusts between organic and functionally paralyzed lower extremities, still the use of the sphygmomanometer as just described offers a demonstrative method which is simple, accurate, reliable, and one in which objective evidence may be made a matter of court record in those cases where legal procedures become the order of the day.

I have purposely refrained from entering into a discussion involving the phenomena presented by the special senses—auditory, visual, smell, and

taste—by the various viscera, and by those due purely to the psyche, in this consideration of hysteria as a clinical entity; to do so would lead one too far astray and time does not permit. Suffice it to say, in passing, that the presentation of phenomena referable to these fields ofttimes calls for careful and painstaking endeavor on the part of the examiner in bringing about their elicitation and proper evaluation. I have merely attempted, in the within essay, to bring before you what appeals to me as some of the more important fundamental truths concerning our present day knowledge of the nervous system of man in its relationship to organic and functional diseases. If I have done so, without bringing my listeners to the point of physical and mental weariness, my object will have been accomplished.

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SOME ASPECTS OF DISTURBED THYROID FUNCTION*

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Disturbed thyroid function presents intricate problems of pathology and physiology that remain none too clear in the minds of those who have devoted years of study in that field. To the physician, who has not specialized, the subject is complex and confusing; although it presents many aspects in which the profession substantially agree, and those aspects are of special interest as they represent more particularly the practical application of the subject.

At a recent medical meeting, attended by the writer, a medical man, prominent in the goiter survey work of the United States Public Health Service, said: "The physician knows little or nothing about goiter, appeal must be made to the rank and file, * * * * * * the layman is better educated on this subject than the practitioner". This statement was made without contradiction before a large group of medical men from the goiter areas of this country.

Specialists and surgeons say that the vast majority of cases, that come to them, have reached the advanced stages before they see them.

Such comment permitted: justification exists for an attempt to present, in simple form, certain definitely valuable data which has arisen, together with a consideration of the relation of the subject to general medicine.

Three elements make up the thyroid gland: connective tissue for support; epithelial elements for secretion; colloid for storage.

The physiology of the thyroid appears to begin and end with iodine. Its special function is the manufacture of thyroxin, which is accomplished by splitting up the iodine containing molecules of such iodine compounds as enter the organism. The colloid contained in the acini is devoted to iodine storage.

Thyroxin appears to have but one function; that connected with internal respiration, or the utilization of oxygen by the tissues. (Marine).

Lack of thyroid function causes cretinism and myxodema. That clinical entities exist, generally unrecognized due to lesser degrees of lowered thyroid activity, seems certain. The lack of progress in the early diagnosis and treatment of hypothyroidism may be explained by the fact that in past years we have been educated in the anomalous function of the thyroid gland by the work of the surgeon; whose interests, for obvious reasons, were almost entirely devoted to the problems of hypersecretion of the gland.

Most thyroid enlargements represent different stages or variations of the same process. That process has its beginning in a deficiency of iodine in the organism. When iodine is scarce, the gland enlarges. This early enlargement seems to be physiologic rather than pathologic. It represents a compensatory hypertrophy produced by the "quest for iodine".

Marine and Lenhart proved that goiter could not be produced in an animal in the presence of sufficient iodine. If deprived of iodine the thyroid starts to enlarge as soon as the iodine content of the gland falls below one-tenth of one per cent.

No definite boundary line between normal and excessive storage of colloid can be pointed out. Storage to the degree of making the human thyroid easily palpable is generally accepted as abnormal. Diffuse symmetric enlargement of the thyroid gland due to an excess of colloid in the acini and not associated with hyperthyroidism is called "simple" or "adolescent goiter".

Adenomas result from the formation of new acini from new epithelial elements. Fetal adenomas develop as a compensatory effort resulting from a low iodine supply from the mother. The

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adenomas which have their beginning in early adult life apparently start in the neglected colloid as a form of compensatory development; since the colloid engorgement has suppressed the normal epithelial activity.

If these adenomatous enlargements do not increase the amount of thyroxin in the body and no constitutional symptoms are produced, they are called "simple adenomata". Such adenomatous goiters may remain quiescent for years and produce no symptoms, or they may "become stimulated", delivering to the body an excessive and poorly regulated supply of thyroxin which increases tissue oxidation to an abnormal degree. Such a condition is properly called "adenoma with hyperthyroidism" or "toxic adenoma".

The hyperplasia of exophthalmic goiter differs from that occurring in adenoma. The epithelial elements proliferate within and fill the acini, thus reducing the space for colloid storage. The resulting secretion is more toxic than the normal and produces a clinical picture peculiar to the "exophthalmic" type of the disease. Charles Mayo says that true exophthalmic goiter is hyperthyroidism plus dysthyroidism, which as Plummer points out may be due to the production of an imperfect thyroxin molecule; which seems to have an affinity for certain tissues.

As yet no standard classification or nomenclature, of goiter, has been adopted. This simple outline lends itself admirably for study and treatment.

1. Colloid Goiter.	
2. Adenoma of Thyroid.	1. Simple.
3. Graves' Disease.	2. Toxic.

All other types correspond with the usual changes that might occur in any tissue or organ under similar conditions. As outlined, the primary pathological changes that occur may be summed up as colloid, adenomatous and exophthalmic. It is the localization of these processes and the fact that the various pathological changes may occur simultaneously, in the same gland, that causes confusion.

The ordinary colloid goiter, with its symmetrical enlargement and soft globular feel, is easily recognized. "Adenomas" in general are nodular thyroids. Simple adenomata and colloids, like health and disease generally, are not always isolated facts. If it happens that such goiter exists in a young person of unstable nervous constitution, with disturbed heart action, "effort syndrome", etc., of independent origin, an error in diagnosis may occur and the case be classified as "hyperthyroidism". These cases erroneously classified magnify the good results of the internist; they lend tone and color to the x-ray therapist's case reports and even render less somber the statistics of modern surgery.

One-fourth of all adenomas become toxic before the patient is fifty years of age. They seldom cause hyperthyroidism before twenty-five, unless "lighted up" by iodine medication. They are five times more common in women than men.

Colloid goiters start in the "teens". Simple adenomas in the "twenties". They become toxic in the early "forties", the more severe cases seeking surgery about five years later.

These facts contrast strikingly with the shorter clinical history of exophthalmic goiter.

A doctor of the old school, in private conversation, aptly compared the symptoms of toxic adenoma to a "beer drunk" and those of exophthalmic goiter to a "champagne drunk"; the one slow and the other explosive.

Exophthalmic goiter, quite commonly, has a typically cyclic course, and, considering the many and variable factors and their influence, it is not so strange that there should be so many exceptions to this course as the fact that it is so often typical.

A workable clinical grouping has been arranged on a basis of the phases of this cycle. A typical case shows slight thyroid enlargement with mild toxic symptoms during a period of several months. This is called "the early exophthalmic". Symptoms gradually increase until about the eighth month. This phase is termed the "acute ascending exophthalmic". About the ninth month a marked and sudden exaggeration of symptoms, or "explosion" occurs. This peak is commonly known as the "crisis". This is usually followed by a period of improvement with fairly constant symptoms, representing the phase, or period of the "educated gland". In about another year this cycle may repeat itself, but with toxic symptoms, not so severe as the first. Later there are "ups and downs". The toxicity of the goiter may wear out, and the final product is a human being who may represent any of the varying stages of "premature senility", the result of cardiac and general degeneration due to driving the engine at high speed with the gears set in neutral.

Advanced cases of exophthalmic goiter have often been treated as endocarditis by heart specialists, as nervous dyspepsia by gastroenterologists, and as neuroses by neurologists. It may be confused with essential hypertension, although the opposite is the more common error. But recently, I have seen essential hypertension attributed to and treated for hyperthyroidism.

Early goiter and incipient tuberculosis present many symptoms in common, as fatigue, lassitude,

weakness, nervousness, rapid pulse, loss of weight, cough, husky voice, and dyspnea. Palpitation, tremor and heart changes occur in toxic goiter. Temperature is more common in tuberculosis.

A very important differential point is the history of increased appetite in early goiter, as contrasted with the lack of appetite in early tuberculosis.

The diagnostic test, devised by Goetsch, is of interest; based as it is upon the fact that the sensitiveness of the accelerator nerve of the heart, to adrenalin, is increased in hyperthyroidism. One-half c.c. adrenalin chloride, 1:1000, with an equal amount of distilled water, is injected subcutaneously. In hyperthyroidism there is immediately formed an area of blanching, much more marked than in the normal. Pulse rate increases, increase in tremor, and nervous symptoms generally, may occur. Patient may feel "short of breath", "heart-thumping", "trembly". There is often pallor and tendency to faint if in upright position.

The foregoing symptoms may help to explain the unfavorable reaction of many patients subjected to local anesthetics, containing adrenalin as used in tonsillectomy and dentistry.

Such patients have prompted the writer to use smaller quantities of adrenalin, and to devise a routine in tonsillectomy whereby a minimum of time elapses from the introduction of the anesthetic until the completion of the operation, and the patient placed in a recumbent position.

Accurate basal metabolism estimations greatly assist in the critical study of goiter. The procedure is used to differentiate border-line cases and as a means of recognizing that increasingly interesting group of N.C.A. (neuro circulatory asthenia), cases of non-thyroid origin. The procedure is particularly valuable in checking up the results of treatment.

The physician without access to such equipment must be guided by the clinical manifestations. In goiter as well as in other conditions in which there is a known increase in metabolic rate, the increase in pulse rate represents a fairly accurate index in lieu of actual metabolism measurements. (Crile).

All types of disturbed thyroid function are numerous but not considered endemic in this state.

Physicians in general practice should have a firm grasp of this subject as there exists a definite need for the application of such knowledge in the administration of prophylaxis and treatment.

Pregoiterous, incipient and advanced types of thyroid pathology may be recognized in the examination and course of other conditions. The first manifestations of disturbed thyroid function often occur during acute or chronic illness, emotional disturbances, adverse environmental conditions, or periods of great stress. It is in this stage that diagnosis is so often most difficult as no criteria can be set as to when normal function ends and hyperthyroidism begins.

Whether or not the heart muscle and other tissues shall become trained, fatigued or degenerated is determined not only by the rapidity of the onset, the degree and duration of the toxemia, but also by the circumstances, environment and characteristics of the individual; all of which may best be understood by the local physician.

Some cases are said to run an acute course and terminate fatally in spite of all treatment; while there can be no doubt that a certain percentage seem to recover without any treatment at all. Between these two extremes there is obviously a need for conservative medical judgment which individualizes each case and does not subject all cases to any given treatment by a set rule.

Let us recall that ancient admonition; the golden rule of the practice of medicine, "If you can do no good, it is most to be desired that you do no harm". For after all, in checking up results, the real test of treatment is the patient's ability to respond to the ordinary stimuli of life when returned to normal environment.

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Discussion

Dr. Cyrel G. Field, Fort Dodge—There has been so much controversy regarding the biochemistry and also the physiology and pathology of the thyroid gland, that I am glad Dr. Harken confined himself to the clinical aspects of the subject. Goiter is a disease in which the symptomatology is so protean that it invades all the specialties of medicine; in fact, it is a disease that causes the intense specialization of today to seem ridiculous. For instance, the cardiologist must know about goiter in order to cope with pathology of the heart in these cases; again, how can the tuberculosis specialist diagnose tuberculosis unless he knows all about goiter? And in the same way the surgeon, the neurologist, every specialty in medicine comes in contact with goiter. Any specialist is incompetent in his own line fully to care for goiter cases. The surgeon must call the internist, the internist must call the neurologist. It seems to me that of late the general practitioners over the

state have fallen into altogether too promiscuous use of iodin, especially Lugol's solution, in the treatment of goiter. It is true that Lugol's solution or iodin is of value in the simple goiter of adolescence; it is of definite value in the hyperthyroidism connected with exophthalmic goiter, especially in the crisis. It is of some value and at least of no harm in the toxic adenoma, but it is definitely and distinctly harmful in the case of the adenoma which is not toxic. Lugol's solution has no therapeutic value in the presence of a goiter which is causing pressure. Recently I have seen a number of cases in which it was given because of an adenoma that was causing pressure. It will flare these up into a condition that is very dangerous. For that reason it is important to differentiate the different kinds of goiter. The classification suggested by the essayist is the best I have seen anywhere, because it is simple. There are three types: The goiter of adolescence, the hyperthyroidism of exophthalmic goiter, and the adenomatous goiter. Adenoma is the type we have to look out for particularly, because iodin must not be given in the case of a non-toxic adenoma. Adenomata generally are asymmetrical and nodular, and occur as a rule after the age of twenty. Two types of adenoma have been described: (1) The so-called fetal type of adenoma, constituting a neoplasm the result of fetal cell tests; (2) the colloid type of adenoma, which is smooth and very much resembles the goiter of adolescence, but because of the age it should not be treated. This type of goiter may be readily recognized because of the age, and when it causes symptoms of hyperthyroidism it soon becomes asymmetrical. The point brought out by the essayist as to the lack of appetite in tuberculosis and the increased appetite in hyperthyroidism is, I think, a very fine one which we should note carefully and remember to look for this differential sign in our histories.

Dr. D. J. Glomset, Des Moines—I would like to emphasize what has already been said concerning the value of basal metabolic readings in the diagnosis of hyperthyroidism, whether it be that seen in exophthalmic goiter, or in toxic adenoma. There is no symptom which is of such great value as that of increased basal metabolic rate in the diagnosis of these conditions. A hyperthyroidism diagnosed without an increased metabolic rate, is not hyperthyroidism. So that a patient in whom repeated normal readings have been made until the basal metabolic rate has been determined properly, is not suffering from hyperthyroidism, regardless of what anybody may say. There is another point I would like to emphasize regarding basal metabolic readings. It is very essential in all but the frank cases of hyperthyroidism to have these readings checked up and repeated once or twice in order to avoid the influence of other factors, such as nervousness. When the first reading is taken patients are frequently very nervous because of the new procedure, and it is therefore important in cases of doubt to repeat the basal metabolic tests once, twice, or even three times, in order that one may be sure that the rate is actually increased.

Dr. Harken—I appreciate very much the discussions by Dr. Field and Dr. Glomset. I am glad Dr. Field brought out the question of the too extensive use of iodin in the treatment of goiter. I think the general practitioner has failed to appreciate the very, very small amount of iodin that is necessary to keep up to a proper point, the supply of iodin in the body, not over fifty or sixty grains a year. The iodin salt seems to me to be most practical for general use. The tablets would certainly be useful when administered by the physician to tide over cases in periods of stress, such as pregnancy, the conditions attendant upon adolescence, etc. I think the small quantity of iodin indicated is a matter which has not been generally understood. I heartily agree with Dr. Glomset in that no case of hyperthyroidism can exist without an increased metabolic rate. However, I have little confidence in estimations as made with the small, cheap apparatus in the physician's office and small hospitals, especially those estimations made by the individual who expects to carry out the treatment and wishes to check up the results with his own metabolic readings.

THE TREATMENT OF COMPOUND COMMINUTED FRACTURES*

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If surgery is to contribute anything to the present treatment of fractures it will be in the direction of greater conservatism in the use of open operations and in the advance of and the use of more perfect methods for external or closed reduction and fixation. Accurate manipulative reduction is a fine art and splinting and extension is a fine art also, which is not to be replaced by the scalpel, bone plate or bone clamp.[1] In my opinion the intervention in closed fracture is at all times hazardous and difficult; volumes have been written on the open methods as was advocated by Lane of England, and as you read the reports you are almost convinced, yes, at times convinced that it is the only method. All you have to do is to operate a few cases, or watch the results of some competent man and you will be thoroughly convinced that if there is any possible way to reduce a fracture, either closed or open, it is much better to do so mechanically, even if it takes a little more time and a little more work than to go in boldly and invade tissues that are already traumatized and the resistance low.

We are becoming more and more appreciative of the value of conservatism in the more compli-

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cated conditions that we find in compound fractures, and the hospitalization of patients in the fracture service prior to operation is becoming more and more common.[2] Early operation for example, may under certain circumstances be a formidable procedure which entails considerable risk, but if the risk and difficulty can be lessened by preoperative measures, that not only place the patient in a more favorable condition for the operation, but also renders the operative field in better condition for the surgeon, such preparation is definitely justified. My own experience with the hospitalization and preoperative care of such patients under constant supervision until they are adequately prepared for operation has been most gratifying.

We have two kinds of compound comminuted fractures to deal with; one, the fractured bone causing the laceration of the soft parts and, second, of where the external trauma produces the laceration of the soft parts also produces the fracture.

The four important things which I would think of to contraindicate immediate operative procedures is: first, shock; second, extensive interference with the circulation; third, the introducing of infection either at the time of injury, or in the subsequent manipulation; fourth, injury to soft parts.

The pendulum has swung to the debridement side since the days of the war, and our instructions during my time in service was to debride the wound and use Dakin's solution, as it has been proven definitely that we may have a poisoning by protein split products. Laboratory workers have shown that the removal of crushed muscular tissue, also severely burned tissue, will prevent the development of shock symptoms in experimental animals. In the army we successfully applied this method of treatment clinically; the explanation for the good results in both instances being that the source of the poisonous cleavage products is removed by the process of debridement. My own experience at that time caused me to be cautious in the amount of bone slivers and fragments that I removed, unless they were entirely stripped of the periosteum, and also to treat the soft tissues with extreme gentleness, regardless of their appearance, for very often by the application of a hot saline or boric solution during the first twenty-four hours we would get good looking tissues. Of course, at any time where the circulation is entirely cut off, we will be compelled to be more radical in our surgical procedure. If the soft part injury is so extensive, and so severe, that the fracture is merely an incident in the crushing and mangling of the limb, then the case falls out of the category of compound fractures, and should be treated from the standpoint of the mangled limb alone. It is entirely inconceivable that any operative intervention on the bone could be helpful except possibly the removal of small fragments ground up in the soft tissues.

It is not necessary when we have a severe injury to soft parts and bone that immediate reduction be done. Do as little as you can to immobilize the parts until you get reaction and then there is plenty of time for manipulation of bone, whatever the case may demand. Do as little suturing as possible of the soft parts. We should remember that a stitch put in may cause tension, interference with circulation and necrosis. We should treat these cases with the same surgical care that we would an abdominal operation, and the same gentleness that surgeons use in brain work.

Cleanse the wound carefully with ether or iodine followed by alcohol. Keep gloved fingers out of the wound as much as possible. Do the cleansing with sterile gauze on a sponge holder. Be sure that you get your iodine to all parts of the wound but do not manipulate too much to accomplish this. Pour the wound full and gravity will take care of the distribution. Cleanse the bony ends with iodine and immediately neutralize with alcohol. If you have a puncture of a bone through the soft parts, do not use manual force to force the bone back through, but enlarge the skin opening, being very careful to have the skin clean before incising. Do not close these wounds tightly. If you do there is great danger of closing up infection that will cause serious trouble. If for any reason we should put in a few sutures, put them in very loosely, giving the tissue a chance to swell without producing tension, and not put them close together. Leave a space between sutures that is large enough for wound secretions to escape.

The first of all in the treatment of these cases is to give the patient enough opiate to control pain and combat shock. Get them warm and keep them warm. Immobilize the injured part, make the patient comfortable. See that the fluid intake is sufficient; get a blood count, an urinalysis; and treat the case the same as you would an abdomen that you were going to operate upon. As soon as the patient begins to rally do not let up on the physical care, but see to it that he gets plenty of nourishment. See that his bowels are taken care of, also, above all things, do not drag him from his room to the operating room and then to the x-ray room, because each time that he is transferred from bed to litter or litter to x-ray

table it only makes it possible for the lowering of resistance and additional infection.

I will report two cases.

On January 3, 1924, Gordon T., aged ten, while sliding on a bob with some other boys went under a street car wedging his left leg between the sled and the car. It was below zero and he was pinned there until they could go to the car barns and get a jack to jack up the car; this consumed about thirty minutes. He was brought to the St. Joseph's Hospital and I was called. I found that the tibia and fibula were badly crushed. The distal end of the proximal bones were protruding through his clothing. The foot was turned around and pointing backward. The skin wound extended from two and one-half inches below knee to ankle, also encircling the leg, there being a strip of skin about one and one-half inches on the posterior internal surface of leg. Patient was in severe shock. I followed the procedure outlined above of pouring wound full of iodine, bringing some tags of skin over it with a couple of sutures, putting the leg up as comfortable as possible in a fracture box, and putting the patient to bed. The whole procedure did not require more than eight minutes.

The parts were kept wet with a hot saline supported by hot water bottles. The foot was cold and pale. On inspecting the injury the following morning I found some little warmth in the foot and the wound with a fairly good color. The leg was not disturbed excepting the application of some clean dressings and the patient was given a prophylactic dose of antitetanic serum. Very little was done in debridement until the third day, and by that time some of the muscle ends were dark, the tibialis anticus entirely sloughed off at the muscle end, and was incised at the tendon end. The dark flaps were trimmed up as far as the necrosis presented. On the tenth day I put on a Thomas splint which gave better access to the wound, secured extension by a tennis shoe which was removed each day, and the foot massaged and bathed in alcohol. The wound at that time began to take on a healthy appearance. It was impossible to keep the distal fragments of bone in position, as the tendo achillis had nothing to balance it after the loss of the tibialis anticus. I then severed the tendo achillis and put the leg up in a plaster cast. The cast was principally windows. That gave access to the dressings, also to the skin grafting which was started fairly early. At that time I had my first x-ray picture taken. The bones were in good position and the wound looking very healthy. In all, I put on six plaster casts and by the end of July we found that we had fairly good union of bone, the wound showing healthy areas of skin. All the grafts that were taken from the patient's mother and brother were failures; those taken from the patient himself nearly all grew and thrived very nicely. I put the patient on crutches about the last of July, and by the first of September, he was able to enter school wearing crutches with a comfortable leg. Still requiring dressings. By the first of the year he was able to walk without the aid of crutches or cane. While I have not allowed him to discard his crutch entirely, he being a very active boy, I am of the opinion that he could have discarded the crutch early in the year and gotten along very nicely. This case just illustrates what patience and time can accomplish.

Miss D., age fifteen, with a party of three were crossing a railroad crossing in auto and was struck by train. It hit the car broadside killing the three other occupants of the car. Patient was thrown out of car and dragged for a distance of thirty to forty feet.

Patient was brought to hospital and upon examination we found the bones protruding through her stocking and skirt. The wound was full of cinders and dirt. Examination revealed the anterior surface of leg badly lacerated with a compound comminuted fracture of both tibia and fibula. The soft parts were badly crushed and the skin on the anterior part of leg from the ankle to the knee were torn off. The skin on the posterior part of the thigh from the knee to within four inches of hip was entirely loosened up and it seemed that amputation was imperative but the patient was in such severe shock that we decided to wait and after cleansing wound and lining up the fracture she was put to bed with leg in fracture box, hot boric dressings and slight elevation of leg. The following morning the foot showed some warmth and a debridement was done of all dead and severely traumatized tissues. This was followed up each day until all devitalized tissues were removed, being very careful to preserve all tissues that showed evidence of having a blood supply. A greater portion of skin of the calf of the leg, and also a large area of the thigh sloughed, leaving a large surface which later was covered with skin grafts at intervals. The bony union was slow and later there developed osteomyelitis.

We opened up and removed the infection, and some small particles of dead bone. She was hospitalized for six months and then put on crutches and sent to her home. The wound still discharges a slight amount at the present time, three years following the operation. She is clerking in a store and is able to dance and skate. She still has some limitation of motion of the ankle.

SUMMARY

First—Do as little as possible during shock.

Second—Get an alignment of the bones and direct your attention to the care of the soft parts.

Third—Manipulate as little as possible.

Fourth—Especially, look after the physical condition of the patient.

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Discussion

Dr. Charles H. Magee, Burlington—No matter how courageous I am in coming to the platform to discuss a subject, as soon as I spy a stenographer I at once become timorous, yea, verily, I become panicky. The reason for this I will leave to Burns to explain:

"Hear, Land o' Cakes and brither Scots,
Frae Maidenkirk to Johnny Groat's;
If there's a hole in a' your coats,
I rede you tent it;
A chiel's amang you takin' notes,
And, faith, he'll prent it!"

When I was called upon to discuss this paper I anticipated that the essayist would present something extremely radical, but the conservatism of the presentation is striking indeed. He is opposed to open operation in simple fractures, and he carries almost the same thought in regard to those that are compounded. His care in the management of the case in that he does not try to secure alignment too soon, his thorough cleansing of the wound, all meet my hearty concurrence. Thoughtful consideration for the patient seems to run through the entire essay. He is not treating just a fracture alone, but he is treating a human being with a compound comminuted fracture. This point I wish to emphasize. When I was a student at the University of Pennsylvania with my friend Jepson, we were listening to a clinical lecture by the great surgeon John Ashhurst, Jr. He was making a physical examination of the abdomen in the case of a man half stripped. During his talk the patient began to shiver with cold, and at once the Doctor stopped in his lecture, picked up a blanket and covered the sick man. Long since I have forgotten what he was talking on, but I have not forgotten that spontaneous act of kindness. We recall the incident of a man journeying along a mountain road, infested by thieves and robbers. He discovers in the path before him a man stripped, wounded and half dead. He has compassion on him and at once dismounts, binds up his wounds, pouring therein oil and wine. Again, we recall the incident of a young carpenter discoursing to a multitude of men and women on the side of a hill and among the many immortal things he said there was this: "Whatsoever ye would that men should do to you, do ye even so to them." Mr. Chairman, it is well for the surgeon to have a trained mind, it is well for the surgeon to have a skilful hand, but nobler than either is a love in his heart for his fellow man. The advice given by the essayist, if followed, will save a great deal of unnecessary pain to injured people and may be even the saving of limb and of life.

Dr. D. C. Brockman, Ottumwa—There never was a greater truth announced in surgery than that by Volkmann a great many years ago when he said that the fate of the patient who had suffered a compound fracture rested with the first dressing. The important point in Dr. Newell's excellent paper consists in the "don'ts". The most important thing in compound fractures is not to do any harm. Ninety per cent of compound fractures as put up by the average doctor are harmed by the first dressing. Usually the first thing he does is to get some warm water and wash the leg. That is the last thing to do. Wash the other leg, but leave the injured leg alone. Put iodin in the wound and cover it up, converting that compound fracture into a simple fracture just as quickly as you can. So many doctors want to see whether or not the wound is doing well, and take off the dressing to examine it. Formerly we did that, cleansing the wound immediately and the second day inspecting it. This is not good practice in a case of compound fracture. Put in your "don'ts". Were there time today I could tell you what not to do in these cases. The treatment consists principally in sterilizing the wound, doing so without putting the gloved finger into it because everything you handle with your glove is contaminated and you do not want to contaminate the wound. Put in iodin. In listening to the paper I was much surprised to hear a young surgeon of today talking about a fracture-box. I know why he spoke of that. He is associated with a number of white-haired doctors of Ottumwa and he has learned how to use a fracture-box. To put a compound fractured limb with a sterile dressing around it in a fracture-box and then let it alone, is the best thing to do.

Dr. J. F. Herrick, Ottumwa—I want to commend the paper; I can add nothing to it. The paper is a safe and conservative one, and I think the Society is favored by its presentation.

Dr. Paul E. Gardner, New Hampton—In cases of compound fracture there is a great tendency on the part of patients to worry because the fracture has not been set. That seems to be the bugaboo of many patients and friends, but I generally tell them that I have associated with me one of the most learned doctors that we know, and that is Nature. She is a very kind doctor.

Dr. Newell—I thank you for the discussion. In reply to Dr. Gardner, I have lost two cases in the past to other physicians because I did not set the fracture at my first visit. I would much rather these patients would change and get somebody else if they are not satisfied with the method I have outlined here. Alignment of these compound comminuted fractures can be made in a week just as well as the same day. It is better to take care of the soft tissues first, making the injury to a bone the secondary consideration.

MALPRACTICE CLAIMS

The Journal of the Nebraska State Medical Society, in an analysis of claims of malpractice, finds as we have already found, that about the same per cent of claims arise in the country districts as in the large centers of population. In Omaha and Lincoln the per cent ranges about the same as in the rest of the state. The apprehension that the country doctor would be called upon to defend the surgeons of the cities has failed of realization.

INDUSTRIAL SURGERY*

JAMES F. CHALMERS, M.D., Fort Madison

I have been asked to read a paper on Industrial Surgery. I have always been interested in this branch of our profession, more especially as it applies to railroad work.

One of the first duties of an industrial surgeon is the protection of the corporation for which he works, he can fulfill this duty and save the corporation a great deal of expense by a thorough examination of applicants for service. The points that are especially looked for are hemorrhoids and hernia. If either of these conditions are present such condition is noted on the examination blank. If this is not noted and the man gets into the service the hernia or piles are always caused by some sudden strain and the corporation has to pay in compensation or law suits. I think I am safe in saying that there is an impulse on coughing in the inguinal canal in 90 per cent of the cases examined, showing the prevalence of potential hernia. The apices of the lungs are always hunted, more especially the right, for incipient tuberculosis, and if any suspicious sounds are found the applicant is informed to come up on three or four successive afternoons for temperature readings. The urine is examined and if albumen, sugar or pus are found his application is held up until the condition is cleared up or until it is certain it is a chronic condition, when he is rejected. Venereal disease is always looked for and means immediate rejection. All employes examined are vaccinated before entering the service, consequently we do not have many cases of small-pox.

Cardiac disease in railroad work is cause for disqualification as also are fits or any nervous disease. It is very important to get any history of epilepsy, more especially in the road men, as this is a positive danger not only to the man himself but to the general public. No man with any tendency to fainting or fits has any business around rolling stock.

Vision and hearing must come up to a certain standard and for road men the color sense is very important. I have known numerous men who came up for examination after years of service and were turned down for defective color sense. This is a great hardship on the men and certainly calls for a careful color examination when applying for employment. Men who are in the service are constantly urged to come up for periodic examination and I find that more and more are taking advantage of these examinations. Any defects discovered are explained to the men and steps are taken to remedy these defects or prevent them from becoming more serious.

Sanitation is also important from the industrial surgeon's point of view. Any infectious disease is reported to the proper authorities and the individual who has an infectious disease is not allowed to return to work until there is no danger of infecting other employes. When a number of cases of typhoid fever come in from some particular station along the line, the water is examined and the employes are informed that we will be pleased to immunize them against typhoid, free of charge. Most railroads and some large industrial works have their own hospitals, either maintained by the men or by the corporations. In these hospitals the experience is large and varied, from the treatment of a superficial skin scratch to a depressed fracture of the skull. We come in contact with the "traumatic" abdomen, ruptured kidney, and very severe wound infections whilst fractures are exceedingly common.

I do not intend to take up the treatment of fractures. Time would not permit, but one thing I wish to impress on this gathering is the importance of taking a Wassermann reaction on every case where a bone refuses to unite. We all know that fractures are the main cause of trouble in malpractice suits and a positive Wassermann is of great assistance first in preventing the case going to court and second in protecting the doctor should he be sued. Indeed, as a routine, I now have a Wassermann on practically every fracture whether it unites or not. Again every fracture is x-rayed and severe fractures are x-rayed frequently. I always insist on having two pictures, one anteroposterior, the other laterally. This is very important. I have frequently seen one picture, say in the anteroposterior position, show the bones in fine shape whilst the lateral picture will show the bones away out of alignment and vice versa. All contused injuries of hands and feet should be x-rayed if there is the slightest doubt as to the extent of injury. It is surprising how many unsuspected fractures of phalanges, carpals and tarsals will be found. Another piece of sound advice which I received from my old teacher in Edinburgh was, "Always introduce the finger to the bottom of every scalp wound before closing it to make sure that there is not a fractured skull". I have found a number of fractures by this method which would have gone undiscovered had this precaution not been taken and might have led to trouble later. When an injury case comes in, a complete record of his injury ought to be made, more especially the part complained

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of should be examined and x-rayed always if in any doubt as to whether or not there is a fracture. One cannot very well x-ray the whole body. I have in mind one case in particular who sued the company for a fracture of the spine. His lawyers had x-rays, so they said, to prove that there was a fracture, yet he never complained of pain in the region of his back and there were no evidences of injury. This was purely a case, in my opinion, of obtaining money under false pretenses.

I now wish to draw your attention to the kind of cases the industrial surgeon runs into by giving a brief report on two cases that came in within two days of each other.

Earl Hershey, age thirty-one, fireman, single. On December 18, 1924, at 1:45 a. m., Henrietta, Missouri, had thrown switch, caught engine, climbing over back of tank, left leg on ladder when some cars came from behind, struck engine tank, car telescoped and caught left leg between the tank and end of car. Femur was broken transversely two inches above knee joint, tibia and fibula were both broken, the tibia being comminuted, parts of it sticking out through the wound. He was brought to hospital at Fort Madison, arriving at 8 a. m. He was given 1500 units antitetanic serum. Wound was cleaned up very carefully, end of lower fragment was placed in the medullary cavity of upper fragment. There was a piece of bone two inches by one inch lying along side of fracture. This was not removed at first but was left to act as splint. The leg was put in wire splint at first until swelling disappeared. Ten days after admission a plaster of Paris cast was applied extending from ankle to hip. Leg was then x-rayed. Window was cut for dressing wound. First cast was kept on seven weeks. It was then removed and there was considerable union. Second cast was applied and kept on six weeks. Wound was healing but there were several sinuses from fragment of bone before mentioned. Patient was etherized and fragment of bone removed. Another cast was applied, opening left to dress wound. Wound is healing gradually. Transverse fracture of femur has united firmly and at this date there is considerable union in the splintered tibia. This young man will have a good leg but it will take at least another four months before he can put any weight on it. When first seen it was a question as to whether or not the leg could be saved.

Patrick Sullivan, age thirty-three, 8052 South Green street, Chicago. On December 19, 1924, firing No. 9 between Chicago and Fort Madison. There was coal and ice on steps. He got down to inspect ash pan to see if it would have to be cleaned. They were running about eighteen miles an hour. Foot slipped and he fell on platform at Chillicothe, Illinois. Second engine struck him, probably the pilot or tank box. He never lost consciousness. When picked up he had extreme pain in right side along posterior axillary line. He was carried inside, called doctor and priest. He came on to Fort Madison on same train, arrived at hospital about 5 p. m. He still complained of the severe pain in chest and on examination there was dullness with decreased breath sounds and numerous crepitations. A diagnosis of hemothorax was made, with fractured ribs. He spat blood immediately after the injury and when he came to hospital. He vomited shortly after accident and all that night. Extreme pain continued for five or six days. Ran a temperature for about a week 99 to 100—never went above 100—pulse ran from 92 to 100. There was no paralysis of legs, but right shoulder was stiff and there was loss of power. On December 30 he was x-rayed. On December 31, 1924, he was put in a full body cast and kept in it for six weeks, removed on February 10, 1925, when second x-ray was taken. On March 13 another x-ray was taken.

About the first ten days after accident he had very severe pain in right hip and it was very sensitive to touch. Indeed hyperesthesia was very marked. This was evidently a traumatic neuritis and it appeared not to return to any extent after cast was applied. Muscles on right shoulder wasted and was very marked two weeks before he got out of bed.

Treatment—Massage and heat were applied to shoulder together with both active and passive movement. Muscles are gradually beginning to show signs of recovery. You can see the ultimate results of fractured spine in the last x-ray picture.

Discussion

Dr. Peter A. Bendixen, Davenport—The paper of Dr. Chalmers has some points that need a great deal of consideration. The first impression I desire to leave with this audience is that "Industrial Surgery" is not surgery outside of "General Surgery". I feel that the industrial surgeon is one who applies good sound surgical principles to an unfortunate maimed victim of an industrial plant. I believe that an industrial surgeon should not only protect the just interest of the employer, but also the interest of the employe. It has always been my endeavor to first serve the injured man, and, second, to promote an amiable agreement between the man and his employer. If there is ever a question of doubt concerning the percentage of disability to the injured man the benefit of the doubt should go to the injured man, and by so doing both parties are satisfied. A point mentioned in this paper, which is of vital importance and which I have repeatedly stated before the Society, is the taking of x-rays. Not only x-rays at the time of the first examination, but x-ray controls during the treatment and a final x-ray on discharge of the patient. I believe that such a procedure is of great value to the patient as well as to the surgeon in charge of the case. The taking of a Wassermann is advisable in a great number of our cases, and the Wassermann with a positive reaction is not only of value to the surgeon's knowledge in the case of fracture, but of value in any kind of traumatic in-

jury. It is also of great benefit to the patient, and to society in general. In conclusion I want to state that a thorough physical examination of an injured individual is of vital importance for future treatment and handling of a specific case.

Dr. William Jepson, Sioux City—I simply desire to emphasize a point brought out by the essayist: That from a scientific standpoint industrial surgery is the surgery that every one of us practices every day in connection with our patients, with this difference: That in the case of industrial surgery there are involved the interests of a corporation which may be called upon to make good certain damages, all of which necessitates that the conditions incident to the injury and surrounding the subsequent care and attention, should be made a matter of record. As so well stated by Dr. Bendixen, the relationship between the surgeon and his patient is such that the patient shall have every care and attention necessary, and yet at the same time there should be no opportunity that any one interested from a mercenary standpoint may have opportunity to mulct that corporation because it was unfortunate in the condition of a man working for it.

Dr. Frank A. Ely, Des Moines—It is seldom that I can refrain from taking a little part in any discussion of industrial cases, simply because it frequently falls to my lot to try and make up my mind whether a man is a malingerer, suffering from hysteria, or really has some organic disease. It is sometimes very difficult to determine whether a man is a malingerer or is simply suffering from a true case of hysteria. Some of my confreres ask me, is there any difference between the two conditions? The difference between the malingerer and the hysterical individual is that the malingerer wilfully simulates a condition; it is a conscious affair. The hysterical individual has his symptoms as the result of certain subconscious ideas which dominate him. In talking with one of our oculists who has had a great deal to do in diagnosing eye and ear conditions in disabled veterans, I asked him what he thought was the best sign of a malingerer, to which he replied, "The fellow who is a groutchy, mean, disagreeable individual to examine is usually a malingerer". I will say from my own personal experience that the man who has to defend his position by being mean and antagonistic is usually a malingerer, because if he were thoroughly convinced in his own mind that he had been injured, he would assume that the examiner would observe that it was sufficiently obvious he had been hurt so that it would not be necessary for him to defend himself by a belligerent attitude. This constitutes one of the best criterions in making such a differential diagnosis. With reference to the Wassermann test, the industrial commissioner has been pleased to rule in most cases that when an individual has been functioning normally up to the time he sustains an accident, the accident is per se the cause of his disability whether he has a positive Wassermann or not. The only way we can get back at that class of claimants and prevent the public paying for a man's night in the red light district, is to make a Wassermann in the case of the applicant for employment, keeping out of service the man who has a positive reaction.

Dr. Charles H. Magee, Burlington—In listening to the essayists I have been rather puzzled. They would have us believe that they have a method by which they can make men the next thing to angelic, that they have a method by which they can eradicate greed from the minds of men and put a muzzle on the shyster lawyer. When they can do that, shortly after we will have the millennium ushered in.

Dr. M. J. Kenefick, Algona—There is just one aspect of these cases to which Dr. Jepson referred, and that is that industrial surgery is different in that we are dealing not only with the individual, but with the corporation. There is the rub. You will remember that about 1917 we had some trouble with the workmen's compensation law, and I wonder if you men who practice in the industrial centers are still having trouble with Abe Funk. In 1917 those of you who were present at the Davenport meeting will remember that a committee made a report on a fee-bill, requesting that the State Society O.K. that fee-bill for industrial surgery and especially that coming under the workmen's compensation law. It was tabled at Davenport. It took us three years in this Society to kill that fee-bill and get it off the records. We who are practicing in the small towns have little to do with this matter, but I know that those of you who live in the industrial centers along the river must have trouble with the workmen's compensation law, and I had hoped that the essayist would make some allusion to this matter because I do not see how you can divorce the subject of industrial surgery from the workmen's compensation law. The intent of the law was all right, but instantly there sprang up, all the way from Des Moines to London, corporations organized for profit only (there is nothing philanthropic about them) to take care of these cases and settle the bills. At one time you were limited to $100, later they raised the limit to $200, which is as much as can be charged, including the hospital bill. I want to know how you fellows who practice industrial surgery and have your compensation censored by the industrial commission, are getting along with it.

Dr. Chalmers—Dr. Bendixen's point was very well taken, namely: That we have to be fair to the employe as well as to the employer. If there is any doubt in your mind as to whether the injury is as severe as the employe would have us believe it is, then give him the benefit of the doubt. I did not take up that phase of the subject for the simple reason that I believe we will find that all the large corporations intend to be honest and to treat the men better than they would be treated if they were to institute a lawsuit. We practically always find that a man is the loser if he takes such a case into court. By the time he pays 50 per cent to some shyster lawyer and gets nothing after defraying the expenses of the case, he would be much better off

by settling amicably with the company. Not only that, but as soon as an employe, at least with the Santa Fe railroad, goes to law in such a case, he automatically loses his job, whereas if he settles amicably they give him his old job back if he is able to do the work, or a new one which he will fill acceptably considering the amount of injury he has had. Fortunately, I do not have much to do with the fee schedule. I am in the hospital and paid by the month. Of course I have my private practice, and there I do get some industrial cases. I had quite a lot of trouble with the Fidelity Casualty Company, in that they would cut my bill every time I sent it in. Finally I ceased sending bills to the company, but sent them all to the commissioner, who usually allowed the fee I put in or even increased it a little.

PICK'S DISEASE CASE REPORT

J. B. Synhorst, M.D., Des Moines

Mrs. J. R. J., aged thirty-one, housewife, presented herself for examination July 24, 1925, complaining of weakness, dyspnea, cough and palpitations. Past history and family history were negative. She had been married eleven years; two children, nine and seven years of age. Present illness dates back to summer of 1923, commencing with gradual weakness and constant fatigue. Soon after she developed dyspnea, orthopnea, tachycardia, palpitations and a constant cough associated with raising of a blood tinged frothy sputum. This condition continued for about nine months, following which all symptoms were practically arrested from three to four months.

In August, 1924, all former symptoms reappeared and associated with gradual enlargement of the abdomen. The chest symptoms, however, were not so pronounced. At this time the patient also noticed enlargement of veins of the forehead.

In September, 1924, patient complained of a rather constant epigastric distress, associated with some belching and bloating. At times the pain was quite severe. The condition was not relieved by soda; and no food intollerance. She would occasionally induce vomiting for relief.

In November the abdomen was so greatly distended that a paracentesis was necessary; two and one-half quarts of straw colored fluid was removed. Tapping greatly relieved her discomfort.

In April, 1925, stools were frequently found to be blood streaked and at times profuse hemorrhage would occur. This condition has persisted to the present time.

Patient again tapped in June and two and one-half quarts of straw colored fluid removed. Following this the fluid recurred very rapidly.

Examination revealed a very emaciated woman with greatly distended abdomen; cyanosed lips; and large varicosities over the frontal region. She was apparently not suffering from her disease. Temperature 99½; respiration 20; blood-pressure, systolic 105, diastolic 60; weight 112 pounds.

Positive findings in the examination were; dullness over bases of both lungs with moist rales. Marked upward displacement of right dome of diaphragm. Area of cardiac dullness enlarged, extending 12 c.m. to left of the mid-sternal line; heart sounds were clear and regular; no valvular lesions. Abdomen markedly distended, measuring thirty-six inches in circumference; large compensating prominent veins in the superficial tissues of the abdominal wall; signs of free fluid in the abdomen; right lobe of the liver extended four finger breadths below right costal margin; smooth contour and tender to palpation; left lobe of liver extending down equally as far. Large varicosities of both limbs with only slight edema of ankles; definite positive pressure in the jugular veins and veins of upper extremities.

Laboratory findings were Hb. 70 per cent, W.B.C. 9200; differential polys 70 per cent, lympho 30 per cent; Wassermann negative; urine acid sp. gr. 1018 with trace of albumin; sugar, negative; microscopic, occasional pus cell; sputum analysis, negative; x-ray, heart enlarged.

Pick's disease, (icing liver, capsular cirrhosis; polyserositis; general chronic perihepatitis) is a chronic productive inflammation of the capsule of the liver and its peritoneal coverings; and often associated with chronic pleuritis and pericarditis. Exciting causes of the disease are unknown.

The lesions consist in the development of thick connective tissue encasements often of cartilagenous consistency.

There is usually a history of inflammation of one or more of the serous membranes. It is questionable which membrane is involved first. However it is not uncommon to have a history of acute pericarditis or pleuritis, which gradually subsides and some years later develops the perihepatitis and ascites.

Ascites is the most constant and striking feature of the disease and is characterized by its excessiveness and rapid recurrence following tapping.

The disease is suggested by history of previous attacks of pericarditis and pleuritis, or their posi-

tive findings; by marked ascites recurring soon after tapping and by the apparent good health the patient enjoys between tappings.

The prognosis is bad as to eventual recovery, but the patient may live many years and health be maintained for a long time; the treatment is entirely symptomatic.

The case reported apparently had a pericarditis, mediastinitis and some decompensation in 1923. This condition accounts for the positive pressure in the upper extremities. The enlarged liver with ascites made their appearance about one year later. Ascites recurred very rapidly following tapping. The patient is active and seems remarkably well; she complains mostly of the discomfort of the distended abdomen. This is quite characteristic of the disease.

In place of repeated tapping, novasurol was used. Novasurol is the double salt of sodium-oxymercuri-o-chlorophen-oxylacetate with diethybarbituric acid. I have seen the drug used on portal cirrhosis and cardio renal cases where there is no urea retention, by Drs. Rowntree and Kieth of Rochester, with rather spectacular results; ½ c.c. of the mercury salt is given intramuscularly and if no reaction, 1 c.c. is given the day following; in three days 2 c.c. may be given. If good diuresis does not occur, 10 to 12 gms. of ammonia chloride for three consecutive days is given without the novasurol. On the fourth day again giving ½ c.c. of the novasurol.

The results with novasurol in this case were very gratifying, each time producing marked diuresis. The circumference of the abdomen was reduced from thirty-seven inches to thirty inches, and a weight loss of eight to twelve pounds.

The patient is confident that she loses more fluid by the use of the drug than by tapping.

By the use of novasurol we are only treating symptomatically, but we do avoid the discomfort of tapping, and the danger of infection that go with such a procedure.

DR. JOHN W. SHUMAN

We have recently received a copy of "The Builder", the official journal of the National Masonic Research Society, which contains as its first number a very interesting paper on Palmyra and the Palmyrians, by Major John Shuman, formerly of Sioux City, and Beirut, Syria, now of Los Angeles, California.

This is an historical account of early masonry. The paper was inspired by a visit to "Tadmor in the Wilderness", in which he gives us an interesting description of the far away people we know so little about.

MEDICAL ECONOMICS*

R. J. EISCHEID, M.D., New Albin

Medical economics is a subject seldom written on, comparatively speaking, in the standard medical literature. After looking over 42,000 pages of standard recent medical literature, I found the term "Medical Economics" indexed four times, three times of which it only referred to some other journal having an article on this subject, and only once did it appear as a short article occupying less than a half page. After securing all the writings I could on this subject, I found that scarcely any two authors wrote on the same phase of economics, their articles were very short, and often only their initials were used to designate their names just as though they were ashamed to have written on the subject. Thus, one writer took up the average earnings of English physicians and found them to be $3,600 and contrasted this with a report of some years previous that the average income of New York physicians was $1000, his detail consisted of the why's and wherefor's of these wide differences. Another writer took up the initial cost of six years in college plus one year internship and found this to average $26,200. He figured a living and spending capacity of the physician to be at an average of $3,600 per year, and this added to 6 per cent on the investment plus a 7 per cent depreciation of the investment, equaling all told $7,006. This then, must be the amount earned, according to this author, before one is on a paying basis at all. Any earnings above this amount might be considered as profit and for investment to take care of the rainy day.

From the above it will be seen that a paper on medical economics can touch anything that pertains to the financial difficulties of the physician. Many of the statements are true in certain localities only, and many of the statements can be applied to practitioners in a special field only. Thus, for instance, it may be true that there are a few here whose education cost their fathers the magnificent sum of $26,200. It is equally true of the rest of us that had we been exposed to the expenditure of $26,200 to secure our medical education, we would have fallen by the wayside before reaching the goal. I for one would have known enough to keep my $26,200 and enter another field of endeavor, instead of being here today reading a paper on how to minimize the financial difficulties of the physician. So whether or not I paid $26,200 for my medical education, as it was stated to average by the

*Read before the Austin Flint-Cedar Valley Medical Association, New Hampton, Iowa, July 7, 8, 1925.

aforementioned author, or whether it was $6,000, we shall not concern ourselves, but I will narrow down my paper to cover only that part on which I can write with authority myself and profit to many of you. Therefore these lines are dedicated to the physician of humbler clay, living in the smaller towns and hamlets, the physician who heard your first shriek in your natal chamber, who later treated you through some insidious fever—and then spoke those words of confidence and comfort to your mother when she almost despaired of you, the physician who smoothed and eased the path of your beloved ancestors as they uttered their last groans in passing to the great beyond; in short I mean the general practitioner. I also wish to include the once exalted family physician, now almost an extinct species. This paper only applies in a minor way to the specialist and physicians of larger cities, many of the things hereafter mentioned could not be successfully applied by them.

I shall first try to define medical economics as I have interpreted it for the inspiration of my paper. Properly applied, medical economics consists of getting what is coming to you, and what to do with it after you have got it. Another way of putting it is to live on less than you make and investing the difference wisely. It is generally recognized that physicians are poor financiers, as a rule they fall easy victims to "oily" tongued agents and other blue sky artists; that among their holdings you will find stock certificates of every conceivable wild-cat scheme, most of them worth only as much as a scrap of paper of like size.

Let us see if we can think of some plausible reasons for this: In the first place, doctors are men, a very large per cent of whom have never had any previous financial experience; they are men who before graduating never earned a dollar, father paid the bill at school, and that was about all the concern the embryo doctor felt about it. The last mentioned is not true of many of the older physicians many of whom paid their own way. They are men who had to keep going in order to keep abreast with their profession, discarding old theories and treatments for newer in the rapidly changing field of medical science. Is it then any wonder that a doctor who frequently deserts his old views in his professional field will fall an easy victim to some artistic Ponzi in the financial field, when he is shown in actual figures a new way of becoming independent by a small investment of blue sky vesture? He has tried to become independent for years in his legitimate practice but knows he cannot do it that way. Another reason is his training in medical college where he has heard nothing but "equal service to all" irrespective of pay and the phrase, "noblest of all professions" pounded into him for four years. Chances are he never heard a lecture on how to deal with a deadbeat or how to collect a bill. I shall refer to this later on.

Medical colleges could greatly enhance their usefulness to the future of their students by having lectures once a week by competent financiers on finances and investments, both sound and unsound, during the senior year. The pseudo schools have done this for years and it is the only praiseworthy feature that the regular school might copy from them for the benefit of the future medical profession.

The solution of the financial difficulties of the practicing physician have often been attempted. It appears to the writer that the advice usually given is impractical and frequently its application impossible. As a class, physicians fail to become independent before old age overtakes them, many of them become dependent on the bounty of relatives, or the charity of friends. Here certainly is a problem that deserves some of their time and thought which they so lavishly spend on their patients, and that too before old age overtakes the physician as it is then too late. I wish to make reference to a work written by D. W. & W. T. Cathell called "The Physician Himself", in the preface of which he states, "The practice of medicine has two sides: the greater or scientific side and the lesser or financial side". I can highly recommend this book to any of you who wish to find some inspiration for the practical side. But I wish to disagree with the authors in their preface of dividing the practice of medicine into a greater and a lesser side. In my sojourn of twelve years I can find no lesser side in it. My answer to the argument that there is a lesser side is by citing an illustration, not from my fancy but from actual life. I know a physician, now nearly three score and ten, I once had the pleasure of being a nearby confrere of his. No night was too stormy, no roads too impassable, no deadbeat impertinent enough to be challenged, but what my honorable confrere would come any minute in the year from his neighboring town into my little burg to take care of my undesirables for me. This colleague will soon now be shelved by old age, his sons and daughters did not enjoy a better education because dad could not afford it. The bankers first mortgage practically owns his home. He was a man of clean habits and possessed the ordinary ability. I put forth this man as a living example of one who exemplified the practical as the lesser side of the practice of medicine. Could we now ask him since discrepid has enforced him

into inactivity, could we ask his uncultured sons and daughters, they would no doubt all tell us that there should be no lesser side to the practice of medicine.

So far as I have noticed the physicians who have been most successful financially have not necessarily been the men who were most skilled or who treated the most wealthy patients, nor those who treated the largest number of patients, but they were the men who possessed a good degree of ability, collected from 95 to 99 per cent of their accounts, and were the objects of detestation by the deadbeats of their community. They all had the same common formula for the attainment of wealth. They lived on less than they made and invested the difference wisely. The size of their estate depended on the size of the difference and their ability to make an investment.

Any physician who does not recognize this formula and conduct his business to conform with it, can rest assured of ultimate poverty and dependency. Even then one must begin early in life as the difference in some cases is so small that it takes a life of accumulation to become independent before infirmity and competition forces one into retirement.

But while I am talking in these glittering generalities, let me depart for a minute and quote facts based upon figures, and figures don't lie (excepting when disseminated by a blue sky artist) I am wondering if there is not a single physician here, if possessed of good health, but could lay away for the rainy day say $25 to $50 per month, if he possessed the automotive will force to do so; I mean above one and all expenses. There are a some of you who could do so at the rate of $100 per month. Let us see what this would amount to. I will now quote to you from Barrons Weekly, a standard magazine on finances. Figuring money worth 5½ per cent, which successful financiers say you can average, by diversifying your investments in conservative high class securities, and reinvesting your income immediately at the same rate, which virtually amounts to compound interest. Estimating that the average span of earning activity of a physician does not extend beyond thirty years, let us see what these amounts invested monthly will amount to.

	10 yrs.	20 yrs.	30 yrs.
$ 25.00	$ 3,988.00	$10,857.00	$22,670.00
50.00	7,977.00	21,714.00	45,341.00
100.00	15,955.00	43,428.00	90,683.00

You will now see that the doctor who lays away $25 per month will after thirty years of activity end up with $22,670. The doctor who can lay away $50 per month after thirty years of activity will have $45,341. I would say that the doctor who is not hampered by sickness and cannot lay away the first mentioned sum of $25 per month above all expenses, there is something wrong; he is not conducting his business properly or his wife or some other members are conducting it for him, or he is not located right. There are many of us who can lay aside $50 a month and then after thirty years we certainly would not be afraid of the rainy day with $45,341, but I am wondering how many physicians are here today who have trodden the path for thirty years and could have easily laid away the $50 and actually have the $45,000, unless it be that he married a wealthy wife years ago, or married a frugal wife, who conducted the business for him. This again proves that doctors are not financiers. There are some of you here today who could have laid away $100 a month and still have a lot of money left to spend. Then after thirty years you would have $90,683 to meet and greet the rainy day with a smile. I think I shall not discuss this class of physicians as I would be speaking to empty seats, there are not any $90,000 doctors here who have laid it up in the practice of medicine. These figures may seem fabulous to some of you. They are based on the principles of compound interest, which every one of us receives if we reinvest our income immediately at the same rate. I would advise any of you who have given this no previous thought to figure it out yourself and prove to your own satisfaction the accuracy of the figures. Money, with interest promptly reinvested at the same rate, doubles itself in fourteen years at 5 per cent, in twelve years at 6 per cent, and in ten years at 7 per cent.

I have just finished telling you what money will do when properly invested in high class securities, such as government, municipal, or utility bonds. But most physicians have made the same investment—land, a farm in the country, or improved real estate in the city. Until up to the past five years these have been uniformly successful. There are no doubt, some of you here today who suffered from the real estate craze of less than a decade ago, and are now almost flat as a consequence. You had forgotten that when you pay more for a thing than it can actually be made to produce (yes, twice more in some cases) that you are entering a field highly speculative, and sometime when depending conditions are just right the investor is bound to get bumped, and this probably at a time when old age or other associating conditions make a financial recovery impossible. Compare this type of security with

that of a high class bond, whose net earnings and value are many times its bonded obligations, and the bonds constituting a prior lien on both of these. You can now no doubt see that in case of a depression your bond will go on making hay for you while your real estate will be a liability rather than an asset. Financial writers have prepared charts presenting curves to show changes in the value of real estate during a certain period of years. In 1897 commodities and real estate prices started upward and continued to climb for twenty-three years, the peak of the movement being reached in 1920. Real estate purchased at a fair market value at any time during this period would have enhanced in value every year. Suppose now the physician adheres to the same type of investment, we all ask: "What are the probable chances of profit?" A chart is given showing the variation during the Civil War. The facts are also stated regarding the variations in price throughout the period covered by the recent war. From these figures the conclusion may be drawn that if the physician is partial to his old type of investment and continues to purchase real estate he will be unsuccessful in the financial field. The rising tide on which he then floated has reached its full, turned, and is now falling. Real estate bought in the future will not become worth more, some will become worth less, each year until the war debts of the world will have been paid, and the enormous wealth destroyed shall have been replaced, and new wealth shall begin to accumulate. This required thirty-four years after the Civil War, and how long it will require this time is beyond conjecture.

I might add that another factor has entered the equation during the last decade. It is the automobile! Nearly every piece of real estate is supporting from one to three automobiles. Government statistics show that it costs 6 cents per mile to operate the most economical car under the most favorable conditions. This advances to 20 cents per mile for the most expensive cars. This creates a most important dilution on the net earning capacity of real estate, thereby ultimately reducing its market value, and until this factor plus the war deflation has found its new level in re-evaluation of real estate and farms it would seem to me to be a good thing to let alone.

I have just finished telling you what to do with your money after you get it, I shall now take up the question of how to get what is coming to you. I wish to go back some seventeen years when I first entered medical college; how well do I remember our beloved dean gray and dignified, admonished us that we were about to enter the study of the noblest of all professions, not even excepting the ministry, and that upon the entering of this grand and noble profession, service was to be rendered to all alike, that the "filthy lucre" was not to enter the equation at all. This repertoire was frequently repeated to us from the day of registration to our graduation when it received its last exalted amplification. I would say that all the apostles of this doctrine were men who believed there was a lesser side to the practice of medicine. But in order for one to get what is coming him, this time honored doctrine of equal service, unmodified, and as propounded by my former instructors, must be forthwith relegated to the scrapheap and that too without regrets. I do not mean that you are to turn down a bonafide case of charity, but I do mean that a large per cent of the applications for charitable service are not bonafide, and that it is up to you and I to separate the counterfeit from the bonafide and apply the proper remedy.

This remedy consists of the intelligent cooperation with your confreres (you probably prefer to call them your competitors). But I heard your story that your competitor is impossible, that he is an immoral reprobate, undependable, a morbid liar and would not even make a high class moron, in short that it is utterly unthinkable to cooperate with the likes of that. While this may all be true and if there is anything else in the catalog of infamy, we might apply that too, and yet not have gone too far in describing your competitor, but this must not stop cooperation between you. But how are you to establish this fabulous cooperation under these conditions?

In the first place you must leave your personalities at home. The fact that your competitors are so immoral and moronlike, and the rest of us angelical, must not enter the equation at all. The trouble with most of us is that our interpretation of playing fair with our competitor is to come half way or 50 per cent of the way and let him come the other half or 50 per cent of the way. Under these conditions cooperation will be short lived. Your competitor and yourself do not have the same yardstick as a measure to determine what is 50 per cent of the way. In order to put cooperation over you will often have to go what appears to you to be, according to your yardstick, 75 per cent of the way, but according to your competitor it is not even 50 per cent of the way. We do not see things alike and each of us possesses some detail favorable to our version not known to our competitor. So you must next forget that there is a definite landmark marking the halfway on which you are to meet your competitor.

I will now give you only the skeleton of the next steps as much depends upon yourself as to the detail of filling it out. The detail you and I might use, are different, but if we follow the same framework or principle the results will be the same. It consists of getting together and making a list of the unworthies of charity, and the amount and length of time they owe each practitioner in your town, and refusing service till all is paid. After you have collected two or three accounts for your competitor which he thought uncollectible for years he will begin to cooperate with you on this plan, and the coldness between you will begin to disappear. He will now be your confrere instead of your competitor and he will begin to note the angelic qualities in us which I ascribed to us a short time ago. With this plan I can assure you, medically speaking, that your deadbeats who infest the cares of day, like the Arabs, shall fold their tents, and as silently steal away.

For night calls you should get a double fee, let this kind of sign on your walls greet your patients: "Night calls; a double fee will be charged for all calls between 9 p. m. and 6 a. m. Confinements excepted", and religiously live up to it. I have never found a confrere but what was willing to cooperate on this. About collecting your bills from your doubtful patients; get after them with a graded set of statements, each a little severer than its predecessor, the patient will soon be as tired of receiving them as you are of sending them, he may settle the bill in order to stop the abuse, if not settled within a year you should demand an interest bearing note. I would suggest sending your statements on Saturday so that your patients will have something to discuss at their Sunday dinner, the statements thereby receiving more attention and consequently better results than those sent on week days which are so easily forgotten during the busy humdrum of everyday life. In dealing with those who have passed the doubtful to the N.G. class, put on your caveman raiment, you cannot insult them. Tell them that in God you trust but all others pay cash. They can hardly claim any affiliation with the Deity, so in a short time they will either have the cash on hand or will make themselves scarce around your place of business. While I will admit that the above requires a lot of backbone and many times tact to avoid becoming too conspicuous, yet the physician who starts in early in his career with these principles in view, will easily develop the grit to put them over, and once he has acquired the habit, considers it one of his most priceless attainments. As you have performed the aforementioned stunts for a time, you will have to resort to them only under the rarest circumstances, as it is a heroic remedy and its results no less heroic. I do not wish any of the foregoing to be so construed that a worthy case of charity should be challenged for pay, on the contrary when worthy charity applies, I wish to emphasize that you and I are to serve gladly and magnanimously. This will be all the easier as there will be so much less of it.

My concluding lines are directed as a severe criticism vs. the physician who refused to cooperate with his confrere in a business way; he is an outcast unworthy of the trust conferred on him, also the physician who has not watched the business end of his profession, who inherited a grand and healthy physique and broke it down before the age of fifty by running after more business when he had too much already; who never even challenged the most impertinent deadbeat; who drove into his neighbor's territory and took care of his deadbeats without question, or pay also, and thereby became too poor to give his beloved sons and daughters a better education; who did a 200 per cent business with collecting about 50 per cent; who was forced into retirement with from ten to thirty thousand dollars on his book with not enough collectible to pay his funeral expenses.

Let us rend the veil of the future and watch the passing to the great beyond of such a physician. You have all been present at such an event, when a small community parted with their pet doctor. Truly it is a striking aspect when rightly analyzed. The minister will probably repeat from Shakespeare, "He was so gentle and so kind, and the elements of nature was so mixed in him that nature might stand up and say to all the world 'This was a man'". Particular stress is put on the fact that he left not a single enemy, that all were served alike, that none were turned away for want of pay, that the elements of nature never were so turbulent but what he found his way to your door, and that the world was better for his having lived, etc. The scene closes as the kind doctor is lowered to his final resting place amid a profusion of flowers and a bewilderment of sobs. Now let us analyze this type of man and see if he was worthy of the canonization he has just received. Is it not true that the kind doctor did much of the work that should have been done by his confreres who had the business ability to collect for their services and would have done so? The way it was no one got a fee, the kind doctor only was the more overworked and the dishonest patient was encouraged in his direful procedure, he told his none too honest friends, and the deadbeat number was greatly in-

creased during the reign of this kind doctor, and the legitimate physician suffered the loss. Now you can clearly see that the world was not better for his having lived, it was truly made worse by his presence. The godess of the millenium must have wept at the pitiful performance of such a misconcepted she man. The heritage he has left to us as his successors being to correct the mischief he has done.

Lest I may have thrown in too many literary gems, I will again briefly recite the points I intended to drive home. Live on less than you make and invest the difference wisely.

Cooperate at all times with even your worst confrere and seek his cooperation in handling your undesirables, leaving all your personalities at home.

Double your fees for night calls.

Collect your bills, if you are below 95 per cent there is something wrong.

Arrange to invest a certain sum regularly and the income therefrom, but only in ironclad securities, avoiding all speculative rates and investments, and it is upon this law of multiple progression that I commend you to your declining years with financial dependence.

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BIRTH INJURIES AND THEIR PREVENTION*

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A wider interest in the causation and prevention of parturitional injuries of the infant, is of recent date, but it is growing rapidly. This is evident to anyone conversant with the recent obstetrical literature. Figures at the present time show the surprising fact that in at least 40 per cent of the autopsies properly performed on all still-born infants and those dying within a few days after birth, show intracranial traumatic lesions of some sort, while in the official and unofficial tabulations of the cause of death, "injury in birth" is given a more inconspicuous place.

The attending physician excusably hesitates to pronounce the infant's death, the result of a parturitional injury because unfortunately and unjustly it has remained the prevalent conception, both among the profession and laity, that fetal injuries are the result of and thus signify, a lack of proper skill on the part of the accoucher. No physician should feel any reluctance in pronouncing and reporting the infant's death as the result of a birth injury, if that is his opinion. If the obstetrician could furthermore be induced to suspect and search for a possible injury, whenever the new born child seems to act abnormally, prompt and proper therapeutic interference certainly would save many children now doomed either to immediate death or possibly to a life sadly marred by a preventable physical or mental defect.

Statistical figures seem to indicate a steady increase in the trend of operative obstetrics. The knowledge that the child can be more or less seriously injured in the course of a normal and spontaneous delivery does not relieve the mind of some physicians from responsibility for such injuries. By far the largest number of severe traumatisms are observed after labors terminated artificially, or by means of instruments. It may be lack of diagnostic ability or lack of judgment, or mere awkwardness of technic, not rarely caused by bewilderment or entirely unnecessary haste. Thus it becomes the duty of the obstetrician not only to prevent as far as is possible these injuries but also the recognition of their presence at the earliest possible moment.

To certain German writers about a decade ago must be given credit for the present interest in traumatization of the child in labor, who began to emphasize the importance of intracranial birth injuries, especially of lacerations of the tentorium, also the cause of still-birth and death within the first few days of life. Systematic search for these injuries from year to year, yielded an ever increasing figure, particularly since the more general adoption and improved method of opening the infant's skull at post-mortem. It is conceded that evidence of intracephalic traumatic lesion of some sort can be discovered, as was stated, in about 40 per cent of still-born infants or those dying soon after birth. Not in all these cases, however, does the discovered injury really account for the death of the child. In a definite percentage, the lesion represents only an incidental finding. We, therefore, know from autopsy findings that not all the intracranial injuries sustained in birth necessarily prove fatal and thus must conclude that they actually occur with a frequency still higher than that ascertained in the study of new-born infants coming to post-mortem. It has been demonstrated by routine ophthalmoscopic examinations of new-born infants that marked traumatic changes

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within the bulbus, chiefly hemorrhage, are far from rare.

Visible retinal hemorrhages, e. g., have been calculated to occur approximately in 20 per cent of the cases after normal spontaneous labors, the figure rising to 50 per cent for infants born of women with contracted pelves. There is ample evidence in the statement that in about 10 per cent of the forceps extractions, a facial nerve is traumatized.

It is impossible to quote any accurate figure as to the incident of clavicular fractures. As a matter of fact, this condition is not recognized until later and then very often by the nurse or mother. One investigator in the service of a large maternity hospital placed the incident at between one and two in every hundred new-born babies, and at six after version and extraction, and eight after forceps operations. Such a claim seemed preposterous but confirmatory proof was soon furnished from other sources. It would seem that various other fractures of the skeleton, such as fractures of the femur and humerus, are more frequent than we have reported in the literature. We have actually reported in the literature cases of dislocated and completely torn out eyes, fractured jaws, dislocated shoulder joints, torn off arms and heads, ruptures of liver, spleen and hollow abdominal organs, long cuts of the scalp made in an attempt to open the membrane, even a few instances of deep perineal lacerations on breech presentations produced in the effort to dilate the infant's anus, mistaken for a seemingly yielding cervix. Rough and hasty efforts in rescusitation sometimes results in more or less pronounced injuries to palate and tongue, rupture of alveoli in the lung, fractures in various parts of the spinal column, cord injuries and internal abdominal traumatizations. It would seem therefore, that a considerably large proportion of the infants are more or less severely injured in the course of birth. A considerable portion of these succumb at the time and are listed as having been due to asphyxiation since the true cause could be ascertained only by autopsy. Others survive and either recover or remain permanently injured physically or mentally. Of the latter most of these are attributed to congenital defects, while in truth they are of natal origin. The problem of birth injuries of the child is a most important one in present day efforts to improve the practice of obstetrics, it is a problem most inadequately considered in the modern text-book of obstetrics.

Responsibility—It might be well to state at this point that responsibility for these injuries does not always rest with the attending physician. There are practically none of these injuries, from intracranial to intraabdominal hemorrhages, as well as fractures of long bones, which have not been authentically observed in the so-called spontaneous or normal labors. The term in medical literature known as osteopsathyrosis, a condition denoting excessive fragility of all the bony structures of the skeleton, would account for injuries caused by the slightest exertion either by pelvis or the soft structures during labor or by the physician in the course of required manipulations during labor.

It is an agreed fact that prematurity accounts for many injuries when the immature child passes through a contracted pelvis, or encounters a not fully dilated cervix or a rigid vulvar ring. It is quite evident from the last remark what danger ensues with the use of pituitrin in premature labor. It may prove difficult to charge up a brachial palsy against the attending accoucher, but can there remain any doubt that definite manipulations on the part of the attendant must have at least something to do with the origin of this distressing condition when a French author was able to record a veritable endemic, thirty cases of Erb's palsy in the practice of a single mid-wife?

That wonderful combination of diagnostic ability, sound judgment and manual dexterity, briefly termed skill, and in the practice of obstetrics acquired by careful observation, by deliberate action without undue haste and much personal experience, after all seems to offer to the child the best, though not an unfailing protection against injury. Well aware of the fact, that at present, less odium rests on him, the attending physician, will more readily look for these injuries. At least, as far as the intra-cephalic birth hemorrhages are concerned, prompter consideration for them and early recognition of their existence surely will save many a child now doomed to die or still worse, to live as physical or mental defective and thus it makes the problem of their prevention worthy of our most serious consideration.

Preventative Measure—In the lines to follow I will endeavor to state practically all known injuries of the child briefly.

Indentations and Fractures of Skull Bones are the result of excessive pressure within a limited area exerted from without. Less often this pressure is caused directly by a forceps blade, more often by a bony ridge protruding into the pelvic canal along which the head is passed by forceful traction. Only in comparatively a limited number of instances are intracranial lesions, the secondary result of the cranial bone injuries just mentioned. In by far, the larger number of lesions consist in lacerations in the dura mater,

especially of the tentorium without concomitant bone traumatization. The following are some figures relating to the frequency with which cerebral hemorrhage has been found in still-births (macerated fetuses excluded) and neonatal deaths. Herbert Spencer (1891), 130 cases of still-births and neonatal deaths, 41 per cent; Holland (1919), 167 still-births, 55 per cent; Capon (1920), 52 still-births, 24 per cent; 80 neonatal deaths, 44 per cent; Cruickshouk (1922), 200 premature still-births and neonatal deaths, 28 per cent; Kennedy (1922), 200 mature still-births and neonatal deaths, 32 per cent. Recent continental and American workers have published much the same results.

Hemorrhages may be (1) subdural, (2) ventricular, or (3) in the cerebral substance and may be classed as severe, moderate or slight. They often occupy more than one site and are more often diffuse than localized. A large subdural hemorrhage spreads into all the cranial fossæ as well as over the surface of the brain. Hemorrhage from the vein of Galen or its branches drains downwards around the cerebelli is likely to have more serious effects than when above it. Subdural hemorrhage is more common than ventricular. As to sites of hemorrhages, the following in order mentioned are the most frequent: (1) into lateral ventricles; (2) over one or both sides of tentorium cerebelli; (3) into tentorium cerebelli; (4) base of brain-diffuse; (5) under one or both tempero-sphenoidal lobes, etc. All hemorrhages are not due to birth injury.

Etiologically they fall into two groups: (1) traumatic or mechanical, and (2) asphyxial. Hemorrhage of traumatic origin is usually found accompanied by tearing of the tentorium cerebelli or falx cerebri: whereas, hemorrhage of asphyxia origin is found in association with the other signs of asphyxia. This distinction does not always hold good for many cases with tentorial tears are found accompanied by well marked signs of fetal asphyxia, i. e., visceral hemorrhages.

To appreciate the mode of origin of this variety of hemorrhage it is necessary to know how the fetal head behaves when acted upon by the forces of labor. The fetal head is a fragile object, the structure of which displays a remarkable combination of qualities which enables it to resist injuries with defects which dispose it to suffer them. To anyone who begins to study the fetal head from the obstetrical point of view, the wonder must surely be, not at the relatively small number of fetuses that suffer cranial birth injuries but at the large number that reach the world alive and uninjured. During its passage through the birth canal, the head is subjected to the action of compressive forces, and is therefore in a state of stress. A certain amount of cranial stress, of course, occurs in every labor, and in every labor there is a certain amount of head moulding—but by far the commonest alteration in shape is elongation of the head in a vertical direction with corresponding shortening in the anteroposterior direction, as occurs in vertex and breech presentation (which comprise about 99 per cent of all presentations) and is the result of pressure applied at the opposite ends of the diameters lying between the occiput and forehead.

The dura mater septa are attached to the cranial bones and form a closed system of stays or ligaments; when the head alters in shape, alterations in the tension of the septa are inevitable, owing to the nature of their attachments to the bones. Excursion and bending of the bones are resisted by the tension of the septa, just as the swaying of a mast is resisted by the tension of its stays. If alterations in the shape of the head becomes too great, as under the influence of excessive cranial stress, the septa tear; and tearing of the septa permits still more extreme alteration in the shape of the head and dangerous disturbances of the intracranial contents. According to this conception, the septa exert a protective function and form a defensive system against excessive alterations in the shape of the head. Support to the theory, that the septa are designed to take stress is found in the fact that they contain special strengthening bands and fibres, arranged on admirable mechanical principles along the lines where stress is likely to fall during the moulding of the head. The chief system strengthening fibres in the falx cerebri and tentorium cerebelli consists of two opposing sets of convergent fibres which meet in their points of convergence at the anterior part of the conjunction of the system is subjected to strain when the head is elongated vertically, as in vertex and breech presentations.

Actual tearing is not in itself a mortal or even a dangerous injury; the tentorium is not a vital structure and being a non-vascular membrane is not itself a source of hemorrhage, except in those straight unusual cases in which the lateral or straight sinus is torn through. Cerebral hemorrhage is not always present in cases of torn tentorium, though nearly always.

It has been suggested by Sharpe and McClaire that in all cases of even mild symptoms of intracranial cerebral hemorrhage (stupor, refusal to nurse and repeated general convulsive seizures) a lumber puncture be made. This simple procedure within the first week may be used to

demonstrate the presence or not, of free blood in the cerebrospinal fluid; if present, then the natural means of its absorption, can be aided by its repetition and, if not present, then an intracranial hemorrhage lesion may be practically excluded. These writers observe also that, hemorrhagic disease of the new-born does not seem to be an important etiological factor and that the anterior fontenelle was not a reliable indicator of the intracranial pressure.

As to Ocular Injuries—When we disregard the retinal hemorrhages, which presumably represent the combined result of abnormal fragility of the vessel walls, increased intravascular pressure and often a decreased coagulability of the fetal blood, all the serious eye injuries, are the products of direct traumatization. The bulbus is pressed out of its socket, completely gouged out, crushed or severely bruised, either by a forceps, unfortunately so applied that the tip of one blade comes to lie directly over the eye ball, or by the finger of a careless attendant, more often a mid-wife, who mistakes the eye socket for a rigid cervix in the need of forcible dilation. It seems unnecessary to explain how much such injuries can be successfully avoided.

Mouth Injuries—If in a breech labor in the management of the aftercoming head, the one or two fingers placed into the baby's mouth are not employed as they should be, simply to maintain flexion, but are made use of to forcibly rotate or extract the head, a fracture of the jaw is likely to be the result of the maneuver. Most of the other types of mouth injuries are due to a faulty technique during resuscitation of the asphyxiated child. In the aspiration of mucus from the pharynx, solely a soft rubber catheter should be employed.

Injuries of the Vertebral Column and Spinal Cord—Even the flexible spine of the infant, more often than generally suspected, is seriously injured in birth. In this connection the question has been raised whether conditions like the so-called congenital scoliosis or some obscure types of seemingly congenital forms of palsy do not actually represent parturitional column injuries, overlooked by the attending physician immediately after birth. Practically all these spinal injuries seem to result from strong traction which either is made not exactly along the axis of the spine but in a lateral direction, or from traction with simultaneous torsion in the effort to effect a rotation of the trunk. Injuries resulting from forced flexion and mainly from hyperextension of the spine by too brusque an execution of Schultze's swingings certainly are preventable.

Injuries of the Sternomastoid Muscle—The condition known as torticollis or wryneck is now generally accepted as a truly congenital defect and is not any longer considered, as used to be the belief, the final outcome of the laceration of a normal sternomastoid muscle at birth. Only the abnormally short and weak muscle is actually torn during labor, and traumatization of such a defective muscle in delivery is practically unavoidable.

Injuries of the Clavicle—As has already been stated this injury occurs more frequently than is commonly assumed, and according to one authority contrary to the prevailing belief, the accident happens more often in vertex than in breech labors.

In a normal vertex labor there really does not exist any necessity for hurrying the delivery of the shoulders by traction. After the head is born, the baby's mouth can be carefully wiped out and protected against further aspiration of fluid, mucus or blood by a piece of gauze placed over it. When difficulty with the shoulders is experienced, one should wait for the support of the next uterine contraction reinforced by a strong bearing down effort of the mother. Here again a twilight sleep may have its disadvantages.

In the management of a breech labor an injury to the clavicle cannot always be avoided even by the most experienced. But no traction must be made on the trunk while an arm caught in the nape of the neck is being freed. Gentle pressure from above will obviate very strong pulling on the clavicles in the Veit-Smellie procedure.

Brachial Birth Palsy—As far as the origin of these lesions either by overstretching the nerve roots or by their subsequent involvement through primary injuries of the shoulder joint is concerned, the general principle can be laid down that wherever there is difficulty with the shoulders, either in vertex or in breech presentations, forcible traction must be made, as far as possible, only along the long axis of the child and never against, or on, a head held in lateral flexion.

All direct compression of the brachial plexus should be avoided. Most teachers of obstetrics lay stress on the importance of placing the tips of two fingers forked over the shoulders, not on the sides of the neck but on the sternum of the infant. If one's fingers are not very long, the end phalanx can be prevented from pressing against Erb's point and from digging during a strong traction into the neck, by deliberately keeping the fingers in full extension; their more natural attitude during a pull on the shoulders would be the dangerous flexions.

Injuries of the Upper Extremities—Both detachment of the upper epiphysis and fracture of the shaft of the humerus, are caused either by severe direct pressure or by forceful traction on the arm with simultaneous rotation. Therefore, very much like the anterior clavicle, also the anterior arm may be fractured in a vertex presentation when too forcibly pushed against the symphysis in the attempt to protect the perineum either by pressing against the posterior shoulder through the distended perineum, by raising the anterior shoulder with a finger hooked into the axilla, or by elevating the already born head. More often, however, the humerus is injured in the management of a breech presentation. Under these conditions the arm is liable to be fractured if it is brought down by direct pressure against it instead of resorting to the following proper procedure. The body of the infant is pushed back a little and then the arm, lying back in the nape of the neck, carefully wiped downward over the face by passing the introduced hand gently from shoulder, over elbow down to the baby's wrist. The obstetrician will be justified in deliberately breaking humerus or clavicle in this procedure if in his best judgment a quick delivery is required in the interest of the baby. However, as already mentioned, undue haste on the part of the accoucher in the management of a breech labor is likely to prove more serious to the infant than the asphyxiation which this haste is trying to prevent.

Internal Injuries of Thorax and Abdomen—Characteristic for all injuries of this group is the fact that, with but rarer exceptions, they are inflicted by rough or unskilled manipulations during resuscitation of the asphyxiated child. Therefore, it is well to advise more earnestly against the vigorous swinging of any seemingly asphyxiated new-born and even against the suspension of the babe by his feet, which seems to have become almost the routine when the baby would seem not to breathe properly immediately after its expulsion.

Injuries of the Lower Extremities—In this brief review only the fractures of the femur need be considered. Version and extraction offer most favorable opportunities for the production of this injury. In this connection it proves interesting to point out the specific danger to all long bones and the spine, of a combination of traction with simultaneous rotation. A not uncommon cause for a fracture at the upper femoral end is the digital extraction of an impacted breech. This particular danger can be minimized if only one finger, and never two, is hooked into the groin, and, if during extraction care is taken to direct all pressure against the infant's pelvis.

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THE TREATMENT OF PERTUSSIS BY ROENTGEN-RAY*

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In March, 1923, Bowditch and Leonard reported a series of cases of whooping cough in which the roentgen-ray treatment was either used alone or in conjunction with vaccines and internal treatment.[1] At the American Pediatric Society meeting held at French Lick Springs in May, 1923, Herman and Bell read a paper on a study of 300 cases of pertussis in a hospital. They treated their cases without the use of the roentgen-rays. In the discussion of this paper Faber, of San Francisco, and I each made a report of our experiences with limited groups of this same type of case treated by the use of roentgen-rays. In the past year several papers have appeared, those of special interest being individual papers by Bowditch and Leonard, a report by Kingston and Faber, and one by Struthers. Believing that the successes and failures as well as the dangers of this treatment are worthy of further emphasis warrants me in making a similar report covering a group of 102 cases which have come under my care during the past twenty months.

One of the most important questions bearing on this newer treatment is whether results warrant changing the state and municipal health department laws now on the statute books. In Illinois pertussis cases are quarantined on the premises. To institute this type of therapy it becomes necessary to move them to some private or public institution where treatment can be given. To carry on this experimental work, the departments of health of the state of Illinois and the city of Chicago have granted me permission for a limited period to remove cases from their homes for treatments. They are moved in private con-

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1. I first became interested in this method of treatment early in 1923, following the receipt of a personal communication from Mr. J. B. Zingrone, of Chicago, in which he cited cases of whooping cough which he had treated with dosage similar to the one I adopted in my series of cases and in which he had obtained very good results.

veyances and with the understanding that due care will be taken not to expose others to the contagion.

Most of our cases have been treated with the following technic: With 4 ma., using a 1 mm. aluminum filter and a 7-inch spark gap, at a distance of 14 inches, a five minute exposure was made, the exception being in young infants when the first treatment at least was given for a shorter period, usually 2½ to 3 minutes. In the majority of cases the treatment was given with the child on its back in the recumbent position. In a few cases the position was changed during the course of treatment, half the exposure being given with the child on its back and the other half while lying on the abdomen. In the remainder the anterior and posterior exposures were alternated. In no instance was the treatment repeated in less than five days while in some the intervals was as long as seven days. The number of treatments varied from one to four. More recently we have treated a few cases with the longer exposure, using 8 minutes with the tube set at 5 ma., 2 mm. filter and a 7-inch spark gap, at a distance of 14 inches. Bowditch and Leonard's dosage was 4 ma., a 1 mm. aluminum filter, a 6 to 7 inch back-up spark at a distance of 28 inches. Struthers has recommended a longer exposure with the heavier filter.

In the study of a series of fluoroscopic examinations and plates in a considerable number of cases marked hyperplasia was noted in the glands about the hilus and also in the peribronchial glands. In many instances there was a diffuse mottling extending for a considerable distance along the bronchial tress. These findings are indicative of a more or less generalized pulmonary involvement and are similar to the findings which have been described by the other authors whose work has been quoted.

The justification for the treatment is based on these findings and the knowledge that the roentgen-ray exerts a beneficial influence, as evidenced by the tendency to reduction in size of hyperplastic lymphoid glands. Bowditch states that "this reduction in size is more theoretical than actually demonstrable in whooping cough but successful clinical application makes the use of the roentgen-ray rational. Whether there is also a direct action on the bacteria is for the present an open question." They reported definite changes in the white blood counts of those cases successfully treated and whether this was due to direct action on the hematopoietic state or secondary to some other cases also remained unexplained.

The thyroid can and should be protected at all times by a lead sheet. That there is great danger of producing thymic atrophy cannot be denied when we administer repeated doses similar to those given to infants suffering from hyperplasia of the thymus. Bowditch recommends four treatments on alternating days and in amounts as above quoted and states: "The total dosage was well within the limits of safety, the four exposures totaling less than one-half of an erythema dose". Personally, I am not convinced that the amount recommended and administered at such short intervals is not dangerous to the thymus and I have therefore used the longer interval of five to seven days between the treatments and the minimum number of cases necessary to give relief, rather allowing the disease to run its course unmodified than to over-expose neighboring parenchymatous tissues. This may account for some of my failures. In speaking of the danger to neighboring tissues I have in mind a case of myxedema presented by Dr. Joseph Brennemann in a child who had received treatments for thymic enlargement during early infancy. The relation of the early treatments to the thyroid atrophy in this case can only be surmised. In my own opinion, therefore, there are dangers which cannot be too strongly emphasized in the repeated application of roentgen-ray therapy.

The time at which the treatment should be begun is of the greatest importance. I have had no experience with the treatment of cases before coughing has begun. In six cases treated before the paroxysmal stage no improvement was noted with the first treatment in 4; in 2 the course was a very mild one. If one may be allowed to draw conclusions based on pathology and the possibility of arresting the development of a future immunity, I believe treatment should be delayed until the children have reached the paroxysmal stage of the disease. In such cases I believe one is justified in concluding that once the disease has reached the paroxysmal stage immunity from further re-infection is assured.

The most striking effects of treatment are noted in the tendency to decrease or relieve the vomiting following the paroxysms and the diminution in the severity and in the number of paroxysms. In some cases marked improvements followed within twenty-four hours after treatment, the treatment being almost immediately followed by evidence of moderation in the clinical picture. In some even the most favorable cases, however, there followed during the first twelve to eighteen hours evidences of increased irritability, wakefulness and nervousness on the part of the child which was interpreted as an evidence of possible overdosage. In others, there was no

evident clinical improvement until the treatment was repeated. In some cases the entire series of treatments failed to give relief. Briefly grouping our series of cases according to age, stage when treatment was begun and number of applications, the results may be summarized as follows:

*. Striking result with marked relief of all symptoms within a day or two of the last treatment and usually with improvement with the first treatment when more than one was given.

†. Considerable relief with amelioration of the more distressing symptoms during the course of or shortly following the treatments.

‡. Questionable results—seemingly some result.

0. No result.

1924 Summer and Fall Group

Age Incidence	No. of Cases	Results *	†	‡	0	Per cent of*	Per cent of†
Less than 1 year	11	5	..	1	5	45	0
Between 1 and 2	11	5	4	..	2	45	36
Between 2 and 4	16	8	4	2	2	50	25
Between 4 and 6	14	5	8	1	..	35	57
Between 6 and 10	10	4	4	2	..	40	40
Total	62	27	20	6	9	Av. 43	32

1924-1925 Winter Group

Age Incidence	No. of Cases	Results *	†	‡	0	Per cent of*	Per cent of†
Less than 1 year	3	2	0	1	0	66.6	0
Between 1 and 2	4	1	1	1	1	25.	25
Between 2 and 4	12	4	2	1	5	33.	16.6
Between 4 and 6	11	2	2	2	5	18.	18.2
Between 6 and 10	10	1	6	1	2	10.	60.
Total	40	10	11	6	13	25.	27.5

In the summer and fall series of sixty-two cases, 43 per cent resulted in striking improvement of the symptoms and could be classed as *; 32 per cent in definite but less marked improvement, and 25 per cent resulted in little or no change in condition of the children. In the winter group of forty cases, 25 per cent showed striking improvement, 27.5 per cent definite but less marked improvement, and 47.5 per cent little or no change. The winter results as a whole were less striking than those of the summer and fall.

The 2-4 year group gave somewhat the best results, while Bowditch and Leonard believed their most striking results occurred in the group under one year of age. I wish again to emphasize the fact that there may be no shortening of the course, the relief experienced being limited to lessening of the acute symptoms, such as vomiting, paroxysmal coughing and attendant loss of weight and insomnia.

Stage—Six cases were treated in the pre-whoop stage. Of these only one failed to develop paroxysmal coughing later, the others requiring further treatment. Ninety-six had whooped before treatment was begun. Fourteen cases received their first treatment in the fourth week. Of these one could be classed as *, 6 as †, 1 as ‡ and 6 as 0. Three received their first treatment in the fifth week. One was classed as *, 1 as † and 1 as ‡. Two received their first treatment in sixth week. One was classed as † and 1 as 0. It will, therefore, be noticed that in cases treated late in the disease only a few striking results were obtained.

Number of Roentgen-Ray Treatments and Results
1924 Summer and Fall Group

No. of Treatments	Total Cases	Results *	†	‡	0	Per cent of*	Per cent of†
1	16	10	3	1	2	62.5	20
2	33	12	15	1	5	36.	45
3	10	4	3	2	1	40.	30
4	3	1	..	1	1	33.	0
Total	62	27	21	5	9	43	34

1924-1925 Winter Group

No. of Treatments	Total Cases	Results *	†	‡	0	Per cent of*	Per cent of *	†	0
1	5	1	0	2	2	20	0	40	40
2	16	3	2	3	8	20.	12.5	20	50
3	16	6	6	1	3	37.5	37.5	6.6	18.7
4	3	0	3	0	0	0	100.	0	0
Total	40	10	11	6	13	25.	27.5	15.	32.

In the summer and fall group of those receiving one treatment, ten, or 62.5 per cent of sixteen cases, were recorded as * and they were relieved to the extent that treatment was stopped. Three showed little or no relief. As an increasing number of doses were needed to influence the course in individual cases, the percentage of striking results became less in each group, the * recorded being 36 per cent with 2 doses, 40 per cent with 3 doses and 33 per cent with 4 doses.

In the winter group, one treatment resulted in 20 per cent of * and no † cases; two treatments in 20 per cent of * and 12.5 per cent of † cases; three treatments in 37.5 per cent each of * and † cases, and four treatments in no * and 100 per cent of † cases.

Of the seventeen cases receiving vaccines in three to five doses without improvement before the roentgen-ray treatment was started, there were 6 *, 4 †, 1 ‡ and 6 showing no result after roentgen-ray treatment. In six cases in which vaccine was given after failure of roentgen-ray treatment, there was no evident improvement which could be construed as related to the therapy.

Blood Findings—On the whole, the best results may be looked for in those cases having high white blood counts. Our cases with counts over 25,000, with 50 to 70 per cent lymphocytes, gave almost uniformly good results following treatment. One case, however, with white counts varying between 51,000 and 61,000, with approximately 70 per cent lymphocytes, required three

exposures before a decided result was obtained.

Considerable difficulty was encountered in getting parents to evaluate and interpret results. In writing to a number of mothers several months after treatment, for their interpretation of the benefit of the treatment, they stated that they did not feel that the cases were helped. This was due to the fact that while the symptoms in a very considerable number of cases were definitely improved as evidenced by the daily tabulation of the number of spells of vomiting, paroxysms of coughing both during the day and night and improvement in the general condition of the child, the course was often not materially shortened. I would, therefore, conclude that it would be wise in every instance to inform the parents that the object of the treatment was not to shorten the course of the disease but to alleviate the acute manifestations.

SUMMARY

Before offering conclusions as to our own experiences in the light of the limited amount of work which has been done, I feel justified in quoting the conclusions of the men who have previously reported series of cases. Bowditch states that in 300 cases of whooping cough treated by the roentgen-ray, there was certain evidence that more than 80 per cent were benefited by the treatment. Only one fatal case occurred in his entire series. The more favorable results seemed to be obtained in the early paroxysmal stage of the disease and in the younger children.

Leonard reports that in 400 cases compared with 200 cases not so treated, the acute symptoms were modified in at least 75 per cent of the cases when used in the paroxysmal stage. In children under one year of age nearly 100 per cent were definitely relieved. He believes that this condition may be due to the fact that the dosage used more nearly met the needs of the younger patients and that modification is necessary in the treatment of older patients. He further concludes that roentgen-rays do not shorten the course of the disease to a marked extent and when used in the early stage apparently do not prevent the onset of the paroxysms. He believes that roentgen-ray furnishes one of the best means of at least controlling some of the severe symptoms of whooping cough. It should be noted that Bowditch and Leonard reported on the same group of cases.

Struthers tabulating forty-five cases, observed that 15 per cent of his cases were promptly cured, that is the whooping cough ceased entirely within forty-eight hours and did not return; 45 per cent showed relief within four or five days as evidenced by a considerable amelioration of symptoms; 40 per cent showed no appreciable change in condition. He believes that the larger the dose of the ray given the greater apparently is the improvement. All of the prompt cures in his series except one received larger dosage—he fails to state the dose used in his paper. He concludes that the earlier in the paroxysmal state the treatment is begun, the greater the probabilities of relief.

Kingston and Faber used one, two and three exposures at weekly intervals. Twenty milliampere minutes were given, with a distance of 12 inches, 9¾ inches spark and ¼ mm. copper filter. They reported twenty-four cases varying from seven months to thirteen years of age. Cessation of vomiting was noted even when the whoop continued. The tendency to residual cough they believed was lessened and the course was shortened and less severe.

CONCLUSIONS

1. Treatments should not be given before the paroxysmal stage is reached because their chief function is to lessen the severity of the disease. Incidently in some of the cases there was a striking shortening of the course. This must be considered of secondary importance, however, and the treatments should not be continued with the idea in view of attaining such a result.

2. In the summer and fall group, * results were noted in 43 per cent, or twenty-seven to sixty-two cases. In ten of these, only one treatment was required, in twelve two treatments, in four three, and in one four treatments.

In the winter group the number of * results were fewer, a total of 25 per cent or ten of forty cases. Of these, one received one, three received two and six received three treatments, respectively. The † plus results were 34 per cent in the summer and fall group and 27.5 in the winter group. The negative results were approximately 25 per cent in the summer and fall cases and 47 per cent in the winter cases.

3. In our cases of secondary pneumonia, there was general improvement after roentgen-ray treatment.

4. In my opinion, excessive exposure of young children to the roentgen-ray is dangerous. Therefore the neighboring organs should be protected and only the minimum number of exposures necessary for relief are to be given.

5. I believe the results, both immediate and remote, of roentgen-ray treatment in whooping cough should be given further study before the method is recommended for general use.

6. It is to be remembered that the adoption of this as a routine treatment would require a change in the quarantine regulations in most cities to permit the removal of patients from their homes to places of treatment.

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CLINICAL DATA IN CASES OF RENAL LITHIASIS*

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The problems relative to the treatment of renal lithiasis which have most engaged our attention in recent years are those with regard to the etiology of the disease, the interpretation of the roentgenogram, the surgical indications when the stones are multiple, and post-operative recurrence.

Etiology—The bacterial cause of renal lithiasis has been quite clearly established in recent contributions on the subject. Rosenow and Meisser succeeded in making stones form in the kidneys of dogs following inoculation with streptococci from the urine of stone-producing patients. Keyser continued the investigation from a chemical standpoint, and was convinced that bacterial exudates caused an atypical precipitation of the urinary crystals from the normal urinary colloids. Realizing that in alkaline phosphatic or incrusted cystitis, the formation of stones could be studied at close range, we have carried out a careful investigation of the etiologic factors involved in such cases. As a result, Hager and Magath concluded that the stones are evidently caused by a gram-negative organism which is capable of breaking up urine into carbon dioxid and ammonia, and thereby favoring the precipitation of the urinary salts in the form of incrustations.

Interpretation of the Roentgenogram—The day of the surgeon who operates on the strength of the patient's symptoms, or on the findings in a roentgenogram alone, is past. Although the interpretation of roentgenograms has greatly improved in the last few years, the necessity of identifying shadows by means of cystoscopy and urography still remains, and by these measures the percentage of error in diagnosis has been greatly reduced. Accuracy in the interpretation of doubtful shadows of the urinary tract depends largely on the degree of skill in the interpretation of the program. The following conditions are most often the cause of confusion: (1) calcified glands; (2) gall-stones; (3) renal tuberculosis; (4) unusual position of stone shadows, median, low and high, and (5) absence of shadows due to soft or early formation.

It is true that the outline of the gall-stone shadow is quite characteristic and usually easily recognized. Nevertheless, there is a definite group of gall-stone shadows which simulate those cast by the renal stones, just as there are shadows of renal stones which are very similar to those of gall-stones. Recent developments in the technic of roentgenography of the gall-bladder have been of great aid in the identification of gall-stone shadows. The Graham method of visualizing gall-bladders in particular often obviates the necessity of employing pyelography. It is evident, however, that in certain cases cystoscopy will be essential to their complete identification.

Calcified areas of tuberculosis, while usually distinguished from stone by peculiarities in the roentgen-ray shadow, will occasionally be a source of confusion, and require cystoscopic findings and urography for their identification. Renal atrophy resulting from multiple renal stones may be exceedingly difficult to distinguish from the shadows occurring with occluded types of renal tuberculosis.

Unusual position of a shadow of renal stone may be the source of confusion. An apparently extrarenal location of a shadow may be due to abnormal displacement of the kidney containing the stone. This is common with renal ptosis. An anomalous position of a shadow of a renal stone, is, however, more commonly indicative of renal anomaly. Thus, an abnormally high shadow may indicate a stone in the upper of duplicated pelves; an abnormally low shadow, a stone in the lower of duplicated pelves, and a shadow near the median line, a stone in the pelvis of a horseshoe kidney.

Stones which are so soft that they do not cast a shadow may be easily overlooked; they can be recognized only with the aid of pyelography. Such stones are composed of soft phosphatic concretions; a mass of urates; semi-organized blood clots with calcareous deposits; putty-like depos-

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its, or cystin. The presence of a stone may be inferred from the pyelogram by an apparent filling defect in the pelvis corresponding to the outline of the stone, and by accentuation of the periphery of the pelvic outline.

Surgical Indications—In the treatment of renal lithiasis, the indications and the method of operating for the removal of a single stone, which is too large to pass spontaneously, have been fairly well standardized. In the presence of multiple stones, however, the indications for operation are not standardized, and the procedure is largely a matter of clinical judgment. It must then be decided whether the stones should be removed, or a kidney. It may be comparatively easy to remove the kidney for stone, but it requires experience and the cooperation of several technical aids to save the kidney and successfully remove all the stones. The tendency in recent years has been toward conservative treatment. If, after the destruction of the kidney necessary for complete removal of stones, sufficient normal tissue remains, it should be saved.

A number of factors must be considered in determining the advisability of conservative operation. It must be recognized that the removal of certain types of stones may necessitate considerable destruction of renal tissue. The amount is not so much dependent on the size as on the shape and position of the stones. Branched or coraliform stones filling the pelvis and calices are usually removed with great difficulty, and with resulting destruction of a large portion of the kidney. Round stones, even if of considerable size, are much more easily removed. Small stones, even if in different portions of the kidney, can usually be removed with the aid of renal fluoroscopy without great loss of renal function. I recently observed a case of this type in which five stones were removed from the kidney, and a month after operation the dye return was practically normal and the function equal to that before operation.

The comparative function of either kidney may be a factor in determining the type of operation, especially in cases of bilateral nephrolithiasis. Intravenous injection of indigocarmin offers the simplest method of determining this. The intensity of the color of the urine from each ureteral orifice gives a rough but fair index of the comparative renal function. The differential phenolsulphonephthalein test, while more accurate, is subject to technical error. When the function is normal, a conservative operation is indicated if there are no other complications; if there is no return of dye, nephrectomy is generally necessary. Intermediate values are inaccurate, because of reflex irritation caused by the presence of stone.

If there is no pain or other evidence of urinary disease, indications for operation may not be urgent. It should be emphasized, however, that the "silent" stone can insiduously cause considerable renal damage. The patient's age may also be a factor, particularly in unilateral conditions. Nephrectomy might be advisable in an older person, whereas with similar conditions in a young person, a conservative operation might prove satisfactory. With stones in both kidneys, every effort should be made to save the kidney when possible, and only conservative operations should be attempted; if the stones are large and branched, it would be inadvisable to operate at all, unless the symptoms were so severe that relief were imperative.

Recurrence of Stone—Cabot deserves credit for directing attention to the possibility of the recurrence of renal stone following operation. Early estimates of recurrence were as high as 50 per cent, but they were based largely on stones overlookd at operation. A recent survey of more than 1400 patients operated on at the Mayo Clinic for renal stone reveals the fact that the actual recurrences were less than 10 per cent.

A shadow may be identified as intrarenal, but there is no diagnostic method which will always enable one to determine the exact number of stones present. It is not generally recognized that (1) although there may be but one shadow in the roentgenogram, it may be due to several overlapping or adjacent stones, and (2) although there may be multiple shadows in the roentgenogram, there may be but one or few stones in the kidney, the number of shadows in the roentgenogram frequently differing from the number of stones discovered at operation. Thus, in a review of our records of 1,026 patients operated on for renal stone, the following interesting data may be deduced:

Illustrations of inexact interpretations are: (1) in 146 cases, a single shadow was reported in the roentgenogram and multiple stones found in operation; (2) in sixty-six cases, multiple shadows were seen in the roentgenogram, and a single stone found at operation; (3) in twenty-one cases, the absence of shadows was reported in the roentgenogram, and one or more stones were found at operation, and (4) in five cases, shadows were seen in the roentgenogram of the upper ureter, but at operation stones were found in the kidney, not in the ureter.

In order to obviate the possibility of leaving stones in the kidney at operation, renal fluoroscopy at the operating table has been practiced in

the Mayo Clinic for the last five years. The method has been used in more than 200 cases, and has been of great assistance in the successful removal of multiple renal stones. In fact, the question might well be asked whether a conservative operation for multiple stones should be attempted without it. It has been claimed by those who have not had adequate experience with the method that it often does not reveal all the stones. This may occasionally be true of minute fragments, 1 or 2 mm. in diameter, but such stones will pass spontaneously in most cases. One of the objections to renal fluoroscopy might be that it places the surgeon in an awkward position when a small stone not revealed by the fluoroscope, is later discovered in the end of a calix or in the parenchyma. Considerable mutilation of the kidney may be necessary before the small stone is finally found and removed. Another objection may be that the exact localization of a small stone by the fluoroscope may be extremely difficult. It is true that it is frequently hard to estimate the relative depth of the site of the stone, but needles may be inserted at right angles, under the guidance of the fluoroscope, so that their points will approximate at the site of the stone. No method of diagnosis is infallible, but in a review of several hundred cases of renal lithiasis in which renal fluoroscopy was employed, even minute shadows were found in less than 3 per cent of postoperative roentgenograms, and in several cases those shadows were doubtful.

The problem of recurrence of renal stone is of unusual interest, and presents several angles. From the history of most patients with renal stone, it is quite apparent that there is usually a definite period during which all stones are formed. It has been found that this period varies from one to ten years, but in most instances it lasts from two to three years. Several stones may form, possibly first in one kidney and then in the other. By the time the patient comes for operation, he has usually had symptoms of stone for several years, so that after all stones have been completely removed, the percentage of probable recurrence is comparatively small. That there is a limited period of stone formation is furthermore borne out by the fact that a second recurrence, after the second operation, is but rare. However, a certain small group of patients have stone-forming kidneys and pass stone after stone in spite of anything that can be done, but in most such cases the stones are small and do not require surgical removal.

It was formerly thought that the size, position and number of stones were factors in the recurrence. A survey of the cases at the clinic, however, refutes the theory that the size of stones particularly increases the probability of recurrence. In fact, single stones of moderate size in the pelvis of the kidney, and requiring a simple nephrolithotomy, have recurred in a relatively greater percentage than any of the others. Branched stones with multiple fragments, and sand should, theoretically, be subject to recurrence. However, if all fragments are removed, which may be exceedingly difficult, their tendency to recur is not above the average. If multiple stones are completely removed, there is a lessened tendency to recurrence, as the stone-forming cycle may have been completed. Since the recent experiments of Rosenow, Keyser, and Hager and Magath all indicate the bacterial etiology of stone, it is apparent that in order to reduce the possibility of recurrence, all foci of infection should be removed. A recent review of post-operative records of patients when renal fluoroscopy was used, and in whom all foci were removed shows a recurrence in but 3 per cent.

In conclusion, it should be said that the diagnosis and treatment of renal stone belong to no single division of medicine and require the close cooperation of the internist, urologist, and roentgenologist. This cooperation is necessary even at the operating table in order to insure the complete removal of all stones with a minimum of renal destruction. Finally, in order to exclude the etiologic factors of stone formation, all possible foci of infection should be eliminated.

DR. OLIVER J. FAY IN NEW YORK

We have just read an editorial in the American Journal of Surgery, published in New York City, which has given us great pleasure, pride and satisfaction. It is not common to find so generous a tribute in a medical journal. Without asking the consent of our appreciative friend, Dr. Walter M. Brickner, we reproduce the first paragraph.

"We commend the careful reading of Dr. Oliver Fay's contribution on 'The Evaluation of Functional Nervous Disorders in Industrial Surgery' in this issue of the Journal. Admirable in style and faultless in composition, it is a model in literary expression—one of those samples of elegance in exposition and excellence in rhetoric that are uncommon in medical writings. But beyond its charm of form, the article is also attractive in its substance, for it rationalizes from aspects that are frequently lost sight of the social bearing of a problem of large and growing importance."

It is with difficulty that we refrain from publishing the entire editorial which contains much more in the same vein, but more particularly in relation to the merits of the contribution and the thoughts and views expressed.

JAMES TAGGART PRIESTLEY, M.D.

OBITUARY

James Taggart Priestley, M.D., one of Iowa's most noted physicians died at his home in Des Moines, December 11, 1925, of heart disease, after an illness of more than a year's duration.

On July 19, 1922, Dr. Priestley celebrated his seventieth birthday and his fifty years of practice of medicine. At this time his friends arranged a complimentary dinner as an expression of appreciation of his long and distinguished services as a practitioner of medicine in Des Moines. Dr. Priestley himself felt that this was an opportune time to retire from active practice of medicine and to employ the residual time allotted him in travel and reading, and thus enjoy the fruits of the long years of service rendered to an appreciative state and city. But it was not long before he began to suffer the effects of the years of unremitting and anxious work of a general practitioner. The organ which is so sensitive to the influence of such prolonged and exacting labor, began to show signs of failing and the anticipated days of happiness were clouded by periods of cardiac distress, which, to one familiar with the dangers of such manifestations, was a constant source of depression and apprehension. Notwithstanding this constant menace, Dr. Priestley maintained a cheerful exterior and a constant interest in his profession, as manifested by his frequent attendance at the meetings of his county medical society.

The October, 1915, number of the Journal of the Iowa State Medical Society was a Festschrift number in honor of Dr. Priestley, who had completed forty years practice. The contributors were his professional associates. One of the contributors was Dr. Walter L. Bierring, who, under the title of "James Taggart Priestley, Historical and Personal", presented an outline of Dr. Priestley's life work, which we reproduce.

Dr. Priestley was born in Northumberland, Pennsylvania, July 19, 1852. His great grandfather was Joseph Priestley, who discovered "pure dephlogisted air", later named "oxygen" by French chemists. Joseph Priestley was born in England in 1733, came to America in 1794 and died in Northumberland, Pennsylvania, in 1804. He was an intimate friend of Benjamin Franklin who urged him to locate in Philadelphia. He was offered the chair of chemistry in the University of Pennsylvania, but preferred the quiet life of a small town where he established a laboratory. Joseph Priestley was a minister and accepted the position of pastor of a small Unitarian church. Dr. James Taggart Priestley's father was a veteran of the Mexican War.

Scientific study and the practice of medicine had an attraction for the Priestley family. Sir William O. Priestley, a member of the family, was a celebrated English obstetrician.

Following Dr. James Taggart Priestley was his son Dr. Crayke Priestley, a young man of great promise, who died early in his professional career, and the two grandsons are now attending the medical school of the University of Pennsylvania.

Dr. James Taggart Priestley located in Des Moines in 1876 and devoted himself to internal medicine. At that time there were but few specialists and, in our country, medicine and surgery were joined, but in a few years, by a process of election in centers of population, men became physicians or surgeons. Dr. Priestley believing there was a wider field in internal medicine, elected the latter and consistently adhered to his choice which brought him honor and distinction. He once stated to the writer that he had sustained at one time or another, the relation of the physician or consultant to every Supreme Court Justice of Iowa, which he held as a distinguished appreciation, a sentiment in which we fully concurred.

JAMES TAGGART PRIESTLEY, M.D.

HISTORICAL AND PERSONAL

It seems most difficult to add a personal note to an estimate of the friend and colleague, as he lives in our midst, without having the strong feelings of regard present a picture that will not be a true measure of the man and his work. It is but right that a man should be judged by his own work, and not by the deeds of his forefathers, but if only for the sake of history, it is interesting to recall that the name of Priestley has been honored by his fellowmen in preceding generations as well as in this. That the direct lineal descendant of Dr. Joseph Priestley, the discoverer of oxygen and one of the most remarkable characters of his period, has labored here in the interest of Iowa medicine these forty years, seems worthy of notice.

In this day of specialized labor, and remembering the age in which Joseph Priestley lived, 1733-1804, it is difficult to appreciate the unusual combination of theologian, scientist, and politician. When we consider again the crude state of knowledge of the physical sciences of that period, it seems indeed remarkable that one, who was trained for the ministry, should after middle life

James Taggart Priestley, M.D.

Born July 19, 1852
Died December 11, 1925

become an acknowledged authority on the chemistry of the gases, the friend of Dr. Benjamin Franklin, and the contemporary of the great Scheele of Sweden and Lavoisier of France.

Priestley's reputation as a man of science rests upon his numerous and important contributions to the chemistry of gaseous bodies; to form a just estimate of his work, and the extent to which it advanced the knowledge of fact and the development of sound theoretical views, we must reflect what chemistry was in the first half of the eighteenth century. The vast science which now passes under the name had no existence. Air, water and fire were still counted among the elemental bodies; and though VanHelmont, a century before had distinguished different kinds of air, and Boyle and Hales had experimentally defined the physical properties of air, no one suspected the existence of the numerous totally distinct gaseous elements which are now known, or dreamed that the air we breathe and the water we drink are compounds of gaseous elements.

In his autobiography Joseph Priestley states that he first became interested in chemistry in Leeds where he moved in 1767 while living next door to a public brewery. He amused himself with making experiments on the fixed air which he found ready made in the process of fermentation. Following this he discovered more new gases than all his predecessors had done, in spite of the fact that he was without the careful scientific training of his contemporaries, and compelled by reason of his limited income as a minister, to create his own apparatus. He laid the foundation of gas analysis; he discovered the complimentary action of animal and vegetable life upon the constituents of the atmosphere; and finally he crowned his work, in 1774, by the discovery of the "pure dephlogisticated air" to which the French chemists subsequently gave the name of oxygen. Its importance as a constituent of the atmosphere which disappears in the processes of respiration and conbustion, and is restored by green plants growing in sunlight, was proved somewhat later.

For these brilliant discoveries the Royal Society elected Priestley a Fellow and gave him their medal, while the Academies of Paris and St. Petersburg conferred their membership upon him. Edinburg had made him an honorary doctor of laws, at an early period of his career, and it is interesting to note that because Priestley's tenets of religious faith were not in harmony with the established church of England, he received no recognition from the universities of his own country.

It was because of religious controversies that he was compelled to flee from Birmingham in 1793, where during a riot his property, apparatus and much valuable scientific material were destroyed. For a short time afterwards he was in charge of a small church in a suburb of London, but then he decided to emigrate to America where his three sons had preceded him the year before.

While evidently a man of radical views in matters of religion and politics, he was a sincere seeker after truth, and all records refer to him as a man of unblemished reputation and irreproachable moral character; Huxley further states that Joseph Priestley was no gloomy fanatic, but as cheerful and kindly a soul as ever breathed, the idol of children, one who charmed away the bitterest prejudices in personal intercourse, who never lost a friend, and the best testimony to whose worth is the generous and tender warmth with which his many friends vied with one another in rendering him substantial help in all the crises of his career.

The arrival of Joseph Priestley in America in 1794, and his frequent presence among the men of science of that day, greatly stimulated scientific studies.

Benjamin Franklin, who had been his friend in England, made strenuous efforts to have Priestley locate in the City of Brotherly Love, but he chose to take up his residence in the small town of Northumberland, Pennsylvania, on the Susquehanna river, where he fitted up a chemical laboratory. Extensive efforts were made, with some success, to found a university at Northumberland, of which Doctor Priestley was to be president.

There is preserved an interesting bit of correspondence between Dr. Benjamin Rush and Dr. Joseph Priestley in reference to the chair of chemistry in the University of Pennsylvania. In the minutes of the trustees of the university is a record of November 11, 1794, which states that Dr. Joseph Priestley was unanimously elected professor of chemistry. For personal and family reasons he felt compelled to decline this honor to which he refers in a subsequent letter to Dr. Benjamin Rush, but he attended frequent meetings in Philadelphia, and delivered several short courses of special lectures, so that he contributed extensively to the literature of the period, and filled an important place in developing the science of chemistry in this country.

During his ten years of residence in this country he was in charge of a small Unitarian church in Northumberland. He died on February 6, 1804, from the effects of a chronic digestive dis-

order, at the age of seventy years. He was born March 24, 1733.

On the 25th of January, a few days before his death, he wrote the following to Dr. Logan: "By means of various illnesses I am reduced to a state of extreme debility; and if the swelling that began in my feet, which has now reached my knees, should continue to advance as it has done, my continuance here can not be long. But I have lived a little beyond the usual term of human life, and am content and thankful. Few persons, I believe, have enjoyed life more than I have done.

"Tell Mr. Jefferson that I think myself happy to have lived so long under his excellent administration, and that I have a prospects of dying in it. It is, I am confident, the best on the face of the earth, and yet, I hope to rise to something more excellent still."

His theological and miscellaneous works and memoirs and correspondence were collected and edited by John T. Rutt, the former in twenty-six volumes (London 1817-32), the latter in two volumes (ib. 1831-32). The edition contains over one hundred and thirty separate works, varying in size from short pamphlets to four volume treatises, and the subjects treated of covered almost the whole ground of human knowledge and speculation.

The best estimate of Dr. Joseph Priestley is given in the address of Thomas Huxley delivered at the presentation of the statue of Priestley to the town of Birmingham on the first of August, 1874, the hundredth anniversary of the discovery of oxygen. In his closing he states: "If the nineteenth century is other and better than the eighteenth, it is in great measure to him and such men as he that we owe the change. If the twentieth century is to be better than the nineteenth, it will be because there are men among us who walk in Priestley's footsteps. Such men are not those whom their own generation delight to honor, such men in fact rarely trouble themselves about honor; but ask in another spirit than Falstaff's, "What is honor? Who hath it? He that died o'Wednesday"?

"But whether Priestley's lot be theirs, and a future generation in justice and in gratitude, set up their statues; or whether their names and fame are blotted out from remembrance, their work will live as long as time endures."

It was my privilege to enjoy a recent visit to Northumberland among the kinsfolk of Doctor Priestley, to be in the home built by Dr. Joseph Priestley in 1794 on the banks of the beautiful Susquehanna, where he lived during his ten years residence in this country. Here he died in 1804, and in a nearby cemetery is his grave.

Through the courtesy of the daughters of Joseph T. Priestley, M.D., great grandson of the above, who lived in Northumberland, 1819 to 1883, many interesting mementoes of Dr. Joseph Priestley were permitted to be examined. Here is preserved the old microscope with single lens, microscopic slides mounted in peculiar bone-frames, each containing a series of five or six preparations; his old telescope, and of particular interest, the magic lantern with colored slides mounted in series of six or eight in wooden frames, crude but artistic, and mostly scenes of home life, which were used for the entertainment of the children of the family at Christmas and other special days.

Most of the chemical apparatus used by Dr. Priestley is preserved in the museum of the University of Pennsylvania and the Smithsonian Institute at Washington.

It was a privilege to see and examine the original manuscript of his autobiography written in 1795; also his signet ring; further, a medal with portrait and wedgewood likeness of Dr. Benjamin Franklin, both being personal gifts.

In this home is kept the portrait painted by Stuart, from a copy of which the accompanying plate has been prepared.

Among these many relics of Priestley is a memorial album presented by the chemists of America, while in session in Northumberland at the centennial of the discovery of oxygen, August 1, 1874, which contains the photographs and autographs of all chemists present. On the last page is a copy of the resolution "that this album be presented to the family in memory of the distinguished ancestor, and that it be preserved until the next centennial August 1, 1974, when the chemists of America are again to meet in Northumberland."

Across the way is the house in which our Dr. James Taggart Priestley was born, spent his boyhood and subsequently studied medicine under the preceptorship of his uncle Dr. Joseph T. Priestley.

James Taggart Priestley was the son of Marks John Biddle Priestley (1823-1898), a great grandson of Dr. Joseph Priestley.

I met several gentlemen who were playmates of James Taggart Priestley and heard the usual reminiscent tales connected with those who have attained greatness.

The physicians in the generations following Joseph Priestley in this country seem all to have been closely affiliated with the University of Pennsylvania. As mentioned before, Joseph Priestley was offered the chair of chemistry in 1794. Dr. Joseph T. Priestley, a great grandson,

graduated from the University of Pennsylvania in 1844, subsequently studied in Paris and then located in Northumberland, and later became the preceptor of James Taggart Priestley, who graduated in 1874; then his son Crayke S. Priestley left the same institution twenty years later in 1894, whose untimely death in 1904, on the threshhold of a useful and most promising career, brought such keen regret.

Sir William O. Priestley (1829-1900), the English obstetrician and pupil of Simpson, who was the discovered of the anesthetic properties of chloroform, was a grandnephew of Dr. Joseph Priestley.

Dr. James Taggart Priestley has been a member of the Iowa profession during forty years, and it will be difficult for one person to present a comprehensive appreciation of his active career. It is needless to say that to have known Priestley for half that period has been one of life's privileges, and in another sense a liberal education. It has taught that we live largely by precept and example, and by the influence of personality in its molding impress on character.

In the history of all successful careers there is usually a period of struggle, and that of Doctor Priestley has not been an exception, yet with his ability, training, hard work, and devotion to high ideals, he has come to a place of highest regard in his profession. One of the interesting stories that has come down from the early period of Priestley's medical life is told by Dr. Addison C. Page about his father and Dr. Priestley who were associates. When the outlook seemed most discouraging, a Northwestern Railway accident yielded a fee of fifty dollars to each, which they promptly spent in each purchasing a horse. From this incident dated the success of both.

If the special characteristics of Priestley are recalled all will agree that the striking feature is his versatility. The rare faculty of adapting himself to all conditions in every circle, lay or professional, cultured or illiterate, is his; he easily dominates by the charm of his personality. Travel has been his hobby, and there are probably very few regions of the globe, open to the traveler, with which he is not familiar. His knowledge of human nature and broad culture have been strong elements in his development as consultant and physician.

He always has entered into the medical life of his city and state with great interest and influence. In 1903 he was honored by the presidency of the State Society. There are few who enjoy a wider acquaintance at meetings of the American Medical Association. He served the section of practice of medicine as secretary in 1896-97, and from 1894-1900 he was on the board of trustees of the association, being instrumental in framing the articles of incorporation under its present plan of organization.

As a teacher he is a clear and forceful lecturer, and the practical hints in his clinical talks are a distinct feature of his discussions at medical conferences.

Doctor Priestley has had an unusual opportunity in developing the medical service of life insurance companies, and the present high plane of this department is largely due to him.

He has made his impress on medical colleagues, and above all he has taught Des Moines physicians the value of promptness in meeting appointments. When Dr. Priestley makes an appointment at eight-fifteen, it requires no timepiece to determine if the meeting is on time.

The cordial fraternal spirit that prevails in the medical profession of Des Moines and delightful "*esprit de corps*" among fellow workers, is in large measure due to Doctor Priestley. His handling of anecdote and story has charmed many an audience, and his rare quality of fellowship have endeared him to a host of friends.

During the years that Doctor Priestley has practiced in Des Moines, medicine has made perhaps the greatest strides in its history, and although he, as he says, "has seen all of them come, and most of them go", yet, he has ever been in the forefront, and we are glad today to acknowledge him the most progressive among us. In this spirit, The Festschrift is offered to James Taggart Priestley as a testimony of the love and esteem of his fellows.

—Walter Lawrence Bierring.

FUND FOR ORGANIZING COUNTY SOCIETIES

At the last annual session of the Medical Society of Virginia the House of Delegates voted to appropriate $1,000, or as much thereof as may be necessary to be expended by the secretary for the organization or reorganization of county medical societies.

The councilors of the respective districts are to visit the field with the secretary when necessary.

DOCTORS IN SIOUX CITY

According to the Sioux City Journal, the proportion of doctors to the population in Sioux City is 1 to 665 persons.

The Journal of the Iowa State Medical Society

DAVID S. FAIRCHILD, Editor ..... Clinton, Iowa

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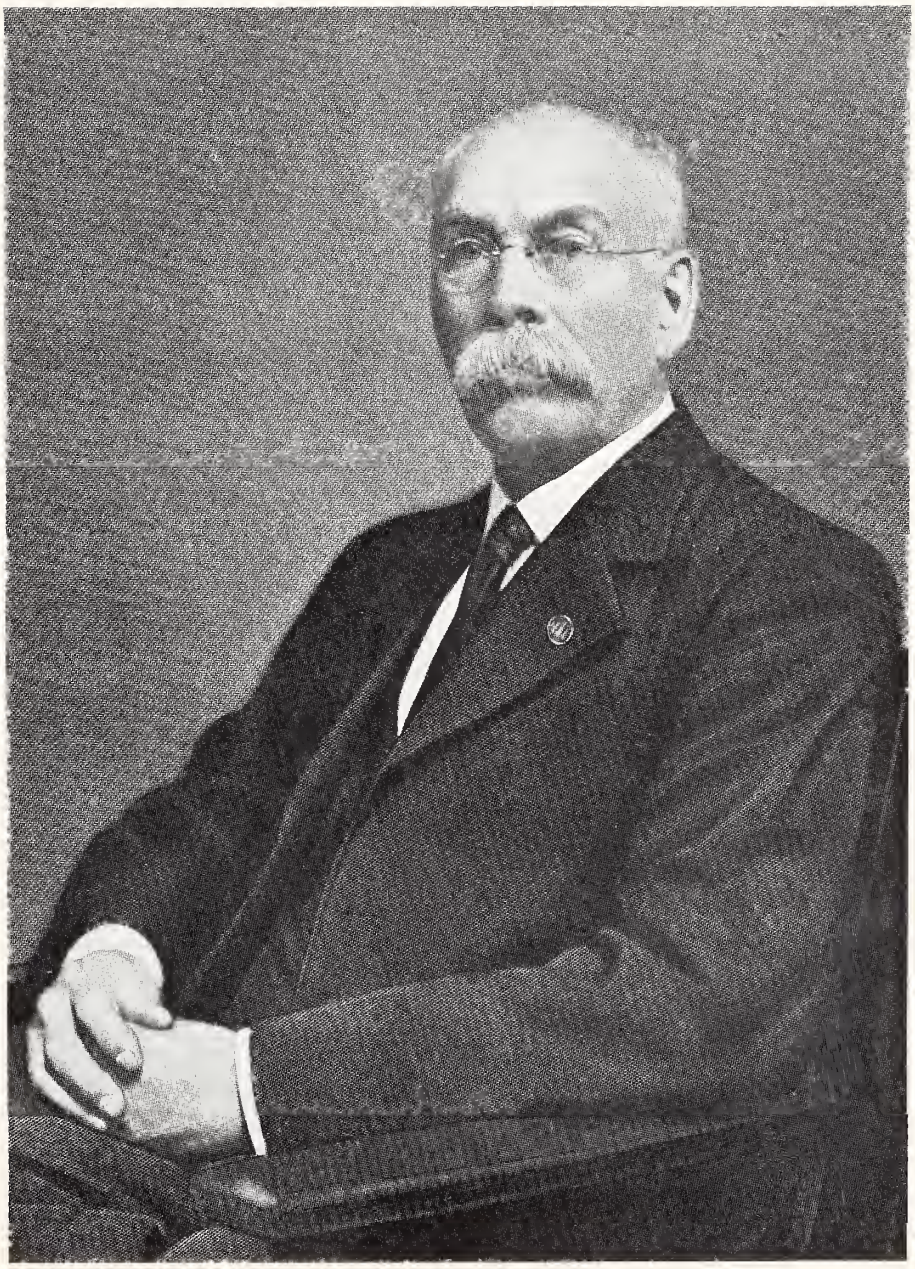
In beginning the new year we are mindful of the events of the year just passed. It is the tendency of our people to look into the future and to forget the past; yet it is the part of wisdom to use the past as a measure of what the future may bring. Every person who has reached maturity, as the old year ends, may with advantage cast a retrospective glance back over the happenings of the year just closed and discover if possible some fact that may have an influence upon his work or activities for the year just beginning. It sometimes happens that such retrospection brings a cloud of sadness which it is difficult to disperse, but fortunately we may discover in the event a lesson that brings rays of hope and encouragement and a recognition of the value of human life, and rewards which cannot be measured by standards which we are all too ready to accept.

During the past year there has passed from our ranks some of our associates whose lives have been full of interest and value, and while we are filled with sadness at their going, we are comforted by the reflection that they did not live in vain, but contributed not a little to the welfare of their respective communities, and honor to their professional associates and made the lives of those left behind larger and more productive, with the assurance that like rewards will come to us in the fullness of time.

Of those who have passed during the year 1925 we may mention A. B. Bowen of Maquoketa, who died April 16, at the age of eighty-three years, after nearly fifty-six years' practice in one community. Dr. Bowen was an ideal country doctor, who reached a high degree of success, based on merit. He enjoyed for the many years of useful life the respect and affection of his people and his death was felt as a personal loss.

David Crawford Brockman of Ottumwa, who died August 21, at the age of seventy-two years, represented a different type of man whose early practice was that of a country doctor, but later moved to a larger community and specialized in surgery, in which he gained distinction. Dr. Brockman was a pioneer in surgery, for which he was not especially trained, but, as often happens, became one by election at a later day, based on a broad experience. Dr. Brockman entered upon the practice of medicine with high ideals, with a conscientious feeling of the duty he owed to the public, and upon this ideal he grew in favor with the people and with the profession, which conferred the high honor of electing him president of the State Medical Society. Not only did Dr. Brockman become a skillful surgeon, but more than all, a gentleman of the highest order. No one could associate with Dr. Brockman without being the better for it.

Dr. Gershom H. Hill of Des Moines died November 23 at the age of seventy-nine years. Dr. Hill represented still another type of man. He had enjoyed advantages that fall to but few. His father was a distinguished minister of the Congregational church, as was also a brother. From his earliest days Dr. Hill had been brought up under cultured and refined influences, he had been taught from his boyhood the value of honor, justice and uprightness of character. When Dr. Hill had reached the proper age he was entered as a freshman in Grinnell College, an educational institution of high ideals, from which he graduated at the end of four years of careful training. Thus was Dr. Hill prepared to enter upon the study of medicine and selected as his life work the study of diseases which especially affected the mind. The natural tendencies of Dr. Hill's mind and his training led him to become a psychiatrist. Not long after his graduation in medicine he was appointed first assistant in one of our largest insane hospitals under the direction of the accomplished Dr. A. R. Reynolds, the first superintendent of the Independence Insane Hospital, whom he succeeded some fifteen years later and served for many years, when he resigned and established the well known "Retreat" at Des



Gershom H. Hill, M.D.

Born May 8, 1846
Died November 23, 1925

Moines. During Dr. Hill's long service in mental diseases, he was often called as an expert in our courts of justice. He enjoyed for many years a position on the faculties of two medical schools. Although Dr. Hill died full of years and honor, his familiar presence at the Iowa State and Polk County Medical Societies will be sadly missed.

We come last to Dr. James Taggart Priestley, who has left us so recently that we have not become reconciled at this dispensation of Providence. For so many years we have lost reckoning thereof, has Dr. Priestley been our friend. Dr. Priestley became a physician by inheritance. For more than 150 years the Priestleys have been famous, commencing with Joseph Priestley, who was born in 1733, the name of Priestley has been known over all the world where science and theology have been taught. If for the moment the distinguished ancestors are forgotten, we have enough in Dr. James Taggart Priestley himself to furnish much food for thought. It was not difficult when Dr. Priestley came to Des Moines fifty years ago to recognize in him the real physician, his appearance and his address were sufficient. As time passed this natural fitness became more and more apparent. It was not long after Dr. Priestley came to Des Moines when it was the privilege of the writer to know him. At that time two other names in medicine come to my mind—Drs. Rawson and Ward, two men of high character who occupied the front rank in the profession. There were also Drs. Hanawalt and Field. But death had come to these, and left Dr. Priestley as their successor in a field well adapted to his genius; Des Moines, as the political and commercial center of Iowa, attracted many men of many kinds, but Dr. Priestley's cosmopolitan spirit was equal to the requirements of such a population and the Doctor found himself equally at home in the cottage of the day laborer and the palace of the governor or the justices of the supreme court. He was also the friend and associate of the obscure practitioner and of William Osler, each in his own sphere loved and admired Dr. Priestley. It mattered not whether the patient was a beggar or a prince, Dr. Priestley understood him and his needs, what fitted his mind or his body. It mattered not what he administered, his touch, his contact, his spirit, mended the man, the woman, the child.

The four men we have mentioned filled four spheres of professional life; Dr. Bowen, the ideal and successful country doctor; Dr. Brockman, the surgeon; Dr. Hill the alienist, and Dr. Priestley, the practitioner and internist, all men of high quality, each filled his place. And now at the close of the year 1925 we stand with uncovered heads to do honor to these and other less favored practitioners of medicine, realizing from the past that our time will come, and may it be said of us as is said of those to whom we do honor.

—Editor.

ANNUAL CONFERENCE OF SECRETARIES OF STATE MEDICAL SOCIETIES

The conference of 1925 was centered on a few subjects which appeared to be of interest to the general medical profession. Nearly all the states were represented by one or more, including the secretary, executive secretary and editor, according to the manner of state organization.

It may readily be understood that while medical practice in itself is essentially the same in all the states, plans of organization and conditions are quite different. The conduct of business was much like an "experience meeting" in which one after another lay before the gathering the plan they have employed in their states, the difficulties and the results. In Vermont, a state of small towns and villages, like New Hampshire and Maine, have their plans. Then in Massachusetts, New York, Pennsylvania, with their great cities and their hill districts; Ohio and Illinois and Missouri, newer states with controlling large cities, with many small but prosperous villages; Arizona, New Mexico and Wyoming, of large areas thinly populated, with small cities and towns separated widely and but few physicians. Then the southern states with surprisingly well organized health service and well ordered medical profession. Then Iowa, a little by itself, in not having large cities, but many large towns and numerous prosperous villages, a large and well-to-do population, largely agriculturists; a state in which the problems are essentially the same throughout the length and breadth of the land. Then we have the age of the states, their traditions and organization. We have forty-eight states organized into one great nation with different constitutions, laws and regulations, and so on. We have heard of much which would tend to make these many states alike economically, morally and socially. We have heard of the New England League, or group of middle states, of the western and southern group, and so on, but there is one fundamental fact we have held to more or less steadfastly, and that is states' rights, or the right of states to conduct their own affairs, notwithstanding the encroachment of federal control. This recognized fact has made it more difficult to organize certain activities than in England where the laws and activities are uniform.

The purpose of these conferences is not to establish a uniformity of organization, but to adjust professional affairs according to conditions as they exist for a common purpose in certain relations.

The American Medical Association is as much a national organization as the British Medical Association, and is accorded the right to determine its membership and to apportion membership among the states, on a basis fixed by itself. There is no controversy as to this right. As this organization has grown in strength and influence, it has wisely established a definite headquarters from which go out influences that tend to bring the medical profession into common relations with each other, the state organization, and the public. To establish and maintain these relations, each state has its own problem how to accomplish the common purpose. The plans are more or less experimental. Those of New York must obviously differ from those of Arizona, and yet it may happen that Arizona has something to offer New York and Pennsylvania. It is noticeable that the differences lessen year by year. An important fact to be noted in this connection is leadership, but not all states are favored with men willing to make the sacrifice of time and labor necessary for this particular kind of leadership or possess the particular quality of leadership. We may note the late J. N. McCormich or his son, Arthur McCormich, of Kentucky, or Dr. F. C. Warnshuis of Michigan, or Dr. Holman Taylor of Texas, or Dr. W. G. Ricker of Vermont, or of the Queen's County Medical Society, Brooklyn, New York.

At this conference the particular objective was public health, especially "Periodic Health Examination of Presumably Well People", and to reach this it is of first importance to inform the public as to the real purpose of these examinations, and to relieve the public mind of the idea that the purpose is commercial. How to impress the public mind with the thought that these examinations are a part of the general health plan, and that they are to be protected against the insidious approach of some dangerous disease of which we have daily examples, there were numerous expressions of opinion. The family doctor was conceded to be the most influential agency, the lay press another, and particularly the thoroughness and completeness of the examination. It was contended by Dr. Dodson that comparatively few physicians had sufficient training and skill to conduct a proper and sufficient examination. To illustrate the matter, Dr. Charles Elliott of Chicago, demonstrated an illustrative examination on a selected case.

The King's County Medical Society, is doing a good amount of work in organizing. The plan which seems most promising is the assumption that these examinations are less for medical purposes than as a part of a general health plan; a graduate extension work. This was presented by Dr. John E. Jennings, president of King's County Medical Society. Blanks have been prepared for a complete record of the personal history of the patient, the findings on examination and many things to show the conditions under which the individual lives. There are many things to be considered other than disease conditions which may seriously affect health and usefulness. The fundamental fact in a successful operation of a periodic health examination, is the interest manifested by the family physician who should prepare himself for a thorough and efficient examination, such as would inspire the examined with confidence in his physician. Nothing would tend to restore the old-time relation of the family doctor as would a successful issue of these health examinations. The presentation by Dr. Anna Mann Richardson and by Dr. Haven Emerson of New York, was of particular interest. Blanks had been made and case histories read, showing what had been accomplished in the short time the work had been in hand. Dr. Haven Emerson outlined in eloquent language what might come to the human family if the prospective mother would present herself to a competent doctor early in her pregnancy, for advice and possible treatment, and in infancy, childhood, adolescence, manhood, middle age, and old age, for repeated examinations.

Of course such a relationship between the public and the doctor is a long way off, but may come sometime. The clinical advantage to the physician of health examinations in the right spirit would be very great. The American Medical Association under the direction of a competent committee, has prepared a manual for the use of the medical profession in conducting these examinations, copies of which Dr. Tom B. Throckmorton will soon distribute among the doctors of Iowa. The manual will set forth the entire plan and purpose of health examination and will be extremely valuable in this work.

CONFERENCE OF SECRETARIES

The conference recently held in Chicago illustrated in some measure the economic side of a state medical society organization. During the past few years it has become apparent that the old plan of meeting once a year, and presenting papers and discussions, did not put the medical

profession in line with other public activities. These meetings served their purpose in those days, but the world has wonderfully changed. Now, there is hardly an organization but has a public service to perform. Then, we prepared ourselves to treat disease as private physicians and surgeons. Now, our function is to protect the public against disease. The same is true in other ways, with law and ministerial associations. The part which tends to make better doctors, better lawyers and better preachers is retained, but we all have a duty to the general public, according to our lights.

When the American Medical Association was organized, the fundamental purpose was to improve medical education, and to improve the relation of one doctor to another, by formulating and adopting a code of ethics. The effect of improving medical education, and the establishing of a code, was to make better doctors and better gentlemen. These purposes were accomplished, but new things came up. Once in a while transactions were published, but at irregular periods. The first volume of transactions of the Iowa State Medical Society covered a period of three years. In the course of time an annual volume was published, the same was true of the American Medical Association. Finally, the American Medical Association journalized its transactions and evolved a medical journal, which in time became a great and influential medical magazine. Later, one state medical society after another established journals. The first idea was, that the state medical journals should be bulletins, for the purpose of publishing transactions, and the Journal of the American Medical Association would furnish the state periodicals with suitable copy. But very soon the state medical societies insisted on having real and established medical magazines, capable of discussing state and general matters. Then came the greatly increased claims for malpractice, in part as a result of changed general social conditions.

This was soon followed by the recognized duty of the medical profession in relation to health conditions, all of which placed an added burden on the state medical societies. The American Medical Association met this burden by an enormous and profitable advertising agency. A great building was erected and a small army of officers and other employes provided to carry on the great work that was never thought of in earlier days. The state societies followed in the same line. Their work and responsibilities increased or they were passed by as unprofitable servants in a great cause. The secretary and treasurer were given a small honorarium, and a contract was awarded to the lowest bidder to publish the transactions. But as time passed and the financial burdens grew, one state society after another increased their dues until now they are from $5, the minimum, to $20, the maximum. No state is willing to be at the bottom of the list in medical activities, whatever the cost; it is a part of state pride to be as near the top of the list as possible, even at the additional cost of $3, $5 or $10 per member.

The work of the secretary's office has vastly increased, the secretary must be an able man, who can earn a large professional income. So it has come about that an executive secretary has been added to the secretary's office at a cost of from $3,000 to $6,000, in states like Iowa, Wisconsin, Minnesota, Michigan and other states of like population. In Iowa, at the moment, we are especially fortunate in having in the secretary's office a combination which works efficiently and costs about $2,000 a year less than other states of our population. Some criticism has been expressed, which we think is unwarranted. The writer is in a position to speak with some authority, having intimate relations with the secretary's office. With our present relations, we shall not require an increase in dues, for the present at least. We have had an ambition to accumulate a fund of $50,000 from which we could realize a permanent income. But we have a haunting fear that such a fund would be subject to raids of a disquieting character, there are so many starving enterprises. What the future may bring we are unable to say, but of one fact we are quite certain, and that is, the secretary's office and the editor's office must be the source of information for the profession of the state at large, for the reason that the individual practitioner is too busy to keep in touch with more than his own and immediate environment.

GROUP PRACTICE

In many centers of population, the experiment of group practice is being tried: a very interesting fact that promises much good to the public and to the profession. Sir George Lanthal Cheatle, chief surgeon, Kings College Hospital, in visiting this country was much impressed with this feature of medical practice in America. The Boston Medical and Surgical Journal in commenting on the New York Times interview, especially referred to the East being engaged in this group practice experiment. It may be true that the more settled and established professional status in the East may be a better field for such experiments than in the West. Whatever may be

the facts in this respect, there are many well established groups in our own, and neighboring states. Group practice for financial reasons alone is liable to many failures, because of jealousness and personal grievances, and of well grounded suspicion on the part of the public. But there is no good reason why medical men may not group together for the higher purpose of rendering better service at moderate fees: fees well within the reach of the middle class people, with the final result of raising the standing of the profession in the several communities. There seems as yet no set form of organization, and there probably is none that will be of general application, except the principle of fair play. Each community may have conditions of their own which may influence the details of organization. Delicate experiments of this kind may need many modifications before the ideal condition is reached.

MALPRACTICE AND AUSTRIAN LAW

The Vienna letter published in the Journal of American Medical Association presents the question of malpractice in Austria that may be of interest to American readers.

Malpractice has become so important a feature in the practice of medicine in America that our readers will be interested in learning what is happening in other countries.—(EDITOR.)

From time to time, in Austria, suits for alleged malpractice are brought against more or less prominent physicians. A strict interpretation of some sections of the antiquated "Constitutio Criminalis Carolina", a law code that was promulgated by Charles V in 1532, might menace the medical profession. The more recent Austrian legislation on the subject deals in three sections with "misdemeanors of physicians" due to "ignorance", "gross negligence and "violations against the security of life". The provisions, however, are susceptible to so many different interpretations that only popular ignorance of the law prevents physicians from being mulcted more frequently than is now the case. To be sure, it is customary for the courts to impose punishment only for "glaring" ignorance, the penalty being the withdrawal of the right to practice until the physician shall have been re-examined. But in several cases physicians were threatened with suits because operations which they had advised and represented as not being dangerous had resulted fatally, owing to complications. Suits have been brought also for alleged neglect to perform an operation. One physician received a six weeks' jail sentence for having given a mid-wife a mercuric chlorid tablet, with instructions "to dissolve it in a liter of water", whereupon the mid-wife allowed the patient to drink the solution that was intended for lavage purposes. Errors of diagnosis, prognosis and judgment do occur, but physicians are human and not omniscient.

In an article signed "Verus", which appeared in a Vienna daily, attention is called to the fact that in 1903 the Austrian minister of justice recommended that opportunity be given during the preliminary examination before the case is brought into open court to discover whether or not a physician is guilty. Even though he is innocent, a physician's reputation is damaged if he is called on to answer a court summons, and often he prefers to "buy his peace" rather than have his name appear in connection with alleged misdemeanors. For these reasons the medical profession demands new legislation which shall explicitly annul the antiquated laws of 1532, 1770 and 1782. A further demand is that, in all actions involving medical problems, physicians shall be accorded decisive influence and authority in determining the guilt or innocence of the accused. This should be affected by the appointment of physicians as temporary judges, in much the same manner as merchants are chosen to function as judges in suits involving technical commercial questions. Furthermore, the law should state explicitly in what kinds of actions expert medical opinion must be sought, for in the past there has been much negligence in this regard. In the "Aerzteordnung" (code pertaining to physicians), which is now being drafted, the last mentioned demand has received no consideration, and an attempt is being made to have inserted in the new penal code a section dealing with the matter.

APPENDICITIS IN THE AGED

Dr. Urban Maes of New Orleans, in a paper read before the Louisiana State Medical Society and published in the New Orleans Medical and Surgical Journal, for September, presents some interesting observations under the above title.

After considering some general facts in relation to appendicitis, Dr. Maes presents observations made from the statistics from Touro Infirmary: "There were eighty-eight cases of acute appendicitis in patients over forty during the period studied. Nineteen appendixes were ruptured and twenty-two were gangrenous; the death rate of the entire group being twenty-six, over 29 per cent. Fifteen of the twelve gangrenous cases died, a death rate of 68 per cent, and nine of the nineteen ruptured cases, a death rate of over 47 per cent. On the other hand ten of the twelve patients who developed fecal fistulæ, 83 per cent recovered, while eight post-operative enterostomies resulted in 100 per cent mortality. No patient under forty developed a paralytic ileus but twelve over that age developed such a condition, again with 100 per cent mortality." The author further observes: "It is clear, then, that the treatment of senile appendicitis is a problem still to be solved."

Dr. Maes arrives at the following conclusions:

1. "Appendicular disease is relatively infrequent in patients over 50 years of age but is accompanied by a very high mortality."

2. "After the thirtieth year the histology of the appendix, as of the tonsil, changes and to this change may be attributed the early thrombophlebitis and the massive gangrene so frequently found at operation or at autopsy."

3. "The objective symptoms give no hint of the gravity of the intraabdominal pathology, and the naturally lowered resistance of elderly persons, plus organic disease of the heart or kidneys, makes prognosis always a serious one."

4. "Ileus, pyemia and septicemia are frequent complications."

5. "Early diagnosis and prompt treatment, in which free drainage is of prime importance, furnish the only possible means of reducing mortality."

6. "Since patients who develop fecal fistulæ usually recover and since a late enterostomy usually does little good, it is suggested that a Zezzer catheter or a Paul tube be left in the cecum at the time of operation.

JOINT LIABILITY OF SURGEONS IN SPONGE CASE—EVIDENCE

(Spears et al vs. McKinnon (Ark.), 270 SWR 524)

The Supreme Court of Arkansas says that the gist of the complaint was that after an operation for ectopic pregnancy, performed on plaintiff McKinnon at a hosital, the defendants, who were the operating surgeon and his assistant, left in the abdominal cavity a sponge or gauze which dropped into the culdesac, where it began to rot the tissues and membranes until it found its way to a point about five inches above the anus, where it sloughed into and out through the rectum nine months after the operation. The sufficiency of the evidence to sustain the verdict was challenged on several grounds, but, in giving the strongest probative force to the testimony of the plaintiff, all reasonable possibilities must be taken into account, and when that was done the evidence was sufficient to support the verdict in her favor.

None of the witnesses remembered having made a personal examination of the grade and size of the mesh of the gauze used in the operation, and while there was some difference between that which passed from the plaintiff and that generally used in the hospital, it might be that on the occasion of this operation the hospital had run out of the kind it generally used and procured and used the kind that passed from the plaintiff. From the circumstances in the case the jury might have so inferred. As the gauze passed out of an abscess which emitted a large quantity of pus, it could not be said, as a physical fact, that the blood stains would have remained on the gauze during its passage through rotting, sloughing tissue from the abdomen into the rectum. It was contended that the gauze would have traveled the route of least resistance, which would have been through the wall of the vagina instead of through the wall of the rectum; but, as the court interprets the testimony of the physicians, they all admitted that the route of the passage of the gauze from the abdomen to the rectum was a possible way but hardly a probable route. Before the judgment and verdict for the plaintiff could be set aside on this ground, the undisputed testimony would have to show that the route of elimination through the wall of the rectum was an impossible route.

This court cannot agree with the contention that because one of the defendants was assisting the other and was not instructed by the latter to search the abdomen for sponges after the operation, he was exempt from liability if gauzes were found in the abdomen. The record revealed that the assistant's part in the operation was to insert and withdraw the sponges. If through carelessness or negligence he failed to withdraw any of them, he could not escape liability on the ground that he was an assistant. Such a rule would have the effect of acquitting one of civil liability growing out of his own negligence.

Again, it was the contention of the defendants that no liability rested upon them as physician and surgeons on account of sponges or gauzes being left in the abdomen of the plaintiff, because the duty of counting them before and after the operation was imposed on the attendant nurse who was in the employ of the hospital where the operation was performed. In other words, it was a rule or custom of the hospital and among physicians for the attendant nurse to ascertain by count whether any sponges or gauzes had been left in the body of the patient, which count entirely relieved operating surgeons from such responsibility, and consequently from liability growing out of a failure to remove sponges and gauze from the openings or cavities in the body. But there was no error in a refusal of the trial court to give requested instructions which expressed this idea. Nor was error committed in excluding testimony offered by the defendants tending to establish a rule or custom of the hospital or of physicians making the count by the attending nurse of sponges conclusive evidence that all of them used in the operation had been accounted for and that none of them had been left in the wound or body of the patient.

The jury found for the plaintiff the sum of $3,500 against each of the defendants. This action was against them jointly to cover damages against them as tort-feasors. There was only one operation and one damage. Both of the defendants participated in it and, according to the verdict, both were liable. Under the testimony they were liable as joint tort-feasers, if at all, and the verdict must be construed as a finding of joint and not several liability. The only way that this could be done was to construe the verdict and render a joint finding against the defendants for $3,500, and the trial court should have so interpreted the verdict and rendered a joint judgment against the defendants for $3,500; and a judgment for $3,500, instead of $7,000 is here rendered against them.—Journal of the American Medical Association.

AMERICAN BOARD OF OTOLARYNGOLOGY

An examination was held by the American Board of Otolaryngology on October 19, 1925, at the Cook County Hospital, Chicago, with the following result: Passed, 120; failed, 23; total examined, 143.

The next examination will be held in Dallas, Texas, on April 19, 1926. Applications may be secured from the secretary, Dr. H. O. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

DUKE UNIVERSITY BUILDING FUND

The will of the late James B. Duke shows an addition to the endowment of Duke University, Durham, which brings the total of Mr. Duke's contributions to the institution to $40,000,000, and that of the additional sum given, $10,000,000, is for the construction and endowment of the medical school and hospital of Duke University. The will directs the immediate expenditure of $4,000,000 in constructing the medical college and hospital, while the remaining $6,000,000 is to be for endowment. The University building fund given by Mr. Duke in 1924 ($6,000,000) was increased at the University commencement last year by $2,000,000, and more recently by $7,000,000, making a complete building fund available for immediate construction for the University proper of $15,000,000. The $4,000,000 for the buildings of the medical school and hospital gives all the departments of Duke University $19,000,000 for immediate construction work. North Carolina has not had heretofore the facilities to complete the medical course leading to the degree of M.D.—Jour. A. M. A.

POTTAWATTAMIE COUNTY AND SMALL-POX

In a recent number of the Marshalltown Times-Republican, we notice that in Pottawattamie county and in southwestern Iowa a rather alarming prevalence of small-pox exists. We have read of this disease in this section of the state and of the efforts of health physicians to prevent the disease spreading for the past year. We have read of the opposition to vaccination in Council Bluffs. We have preserved a copy of the "Nonpareil" of some months ago, which revealed a most surprising state of affairs, it reminds us of an earlier period of the world's history. When we stop to reflect on the simple and safe method of absolutely preventing small-pox we are filled with surprise and astonishment that in a community we had always supposed to stand among the first in intelligence and progress, should have moved back a hundred years. It is not the fault of the medical profession, which has, for more than fifty years, held first rank in the Iowa profession. If it is official ignorance and negligence, we trust that the public will see to it, for its own good name, that a change be made. There is reported from the office of health commissioner Griswold 200 cases of small-pox in Pottawattamie county.

POST-OFFICE DEPARTMENT

There is something of sacredness about the contents of a letter. The writer often reveals more of himself on the written page than he would in direct conversation. This revelation of course, is designed only for the eyes of the correspondent.

In this country a wholesome respect has been built up for the sanctity of a letter but it is not so respected in many other countries where the opening and reading of sealed mail becomes, at times, so prevalent that the practice has earned the appelation "cracking seals".

When a letter, without a return address, can not be delivered for any reason, it is sent, after a certain time, to the dead letter office.

There it is opened and read—not for the possible scandal it may contain—but with a view to finding some clue which will enable forwarding on to the addressee or returning to the sender.

Out of every five letters received at the dead letter office such a clue is found in one and it is sent merrily on its delayed way to one or the other of the two persons most interested in its disposition. The other four are destroyed.

Every person knows his own address and if he would put it on the envelope, the contents would remain inviolate and the letter would be returned with notice of non-delivery.

Not only that but the dead letter office and all its attendant expense would go out of business because less than one letter in a hundred reaching that institution contains a return address.

U. S. VETERANS BUREAU

In order to carry out the work of regional and hospital standardization of clinical and administrative service in the field, General Hines, director of the Veterans Bureau has just assigned four medical supervisors to a tour of field duty with stations at New York, New Orleans, Chicago and San Francisco.

To facilitate the handling of medical problems, it is the plan of the director to alternate field and central office service for staff physicians so that they may become thoroughly familiar with all phases of medical administration both in the field and in central office and also in order that the medical service may be completely standardized and uniform throughout. This plan was strongly endorsed at the last meeting of the Medical Council of the Bureau in February.

Dr. Winthrop Adams will take station in New York and his territory will cover the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia and District of Columbia.

Dr. Ord Everman is assigned to Chicago to serve the states of Ohio, Indiana, Kentucky, Illinois, Michigan, Wisconsin, Iowa, Missouri, Kansas, Nebraska, Minnesota, and North and South Dakota.

EXTRA PRINTS OF DR. PRIESTLEY

We have had a number of prints of Dr. Priestley, similar to the one in this issue, struck off on extra heavy enameled paper. These prints are suitable for framing.

If you want one send twenty cents to the Journal of the Iowa State Medical Society, room 903, Bankers Trust building, Des Moines, Iowa.

NEW ADVERTISERS

There is a saying among the laity that a good doctor is usually a poor business man—and that too often proves to be the truth. In connection with the aim to make the Journal of increasing value to its readers, Halsey, Stuart & Co., a sound, reliable investment house have been induced to advertise in the Journal during 1926. Articles and reliable information, on how to build up an estate, will also appear from time to time.

You will no doubt note with pleasure that V. Mueller & Co., one of the largest surgical instrument houses in the United States, have an advertisement in this month's Journal. G. W. Wallerich, the manager of the company is a native Iowan, and was raised in Des Moines.

M. M. Matthies Laboratory, Inc., also appear in the advertising pages for the first time.

Below are given five reasons why you should patronize Journal advertisers.

First: Because everything of a medicinal nature advertised in the Journal has been approved by the Council on Pharmacy and Chemistry of the American Medical Association. You are thereby protected from preparations and drugs of questionable action.

Second: Because none but reliable firms are permitted to advertise.

Third: Because you have the assurance that you will receive full value for your money.

Fourth: Because the revenue from the advertising pages helps to make your Journal one of the leading state journals.

Fifth: Because by so doing you will help your State Society.

CARELESSNESS AT CROSSINGS

Last month fourteen automobiles ran into Milwaukee trains on highway crossings.

In three of the fourteen cases the drivers of the autos ran into trains that were standing still on the crossings.

In the same month there were only sixteen cases where autos were struck by trains.

These figures show that nearly half of the accidents in that period were due to gross carelessness on the part of auto drivers and could have been avoided.

It is fair to assume that many if not all of the other cases—in which trains struck the autos—were also attributable to the same reckless driving of autos.

Among the reasons given for not stopping were: thought they could beat the trains; going too fast to stop; defective brakes; did not look; thought track was further away; under influence of liquor.

At one crossing, amply protected by gates and bells, an auto pulled around a truck which had stopped to allow the train to pass, and drove through the gates into the side of the train.

In another instance where the driver of a car was properly flagged but kept going until he hit the train, the accident was witnessed by the mayor of the town who immediately authorized the flagman to arrest all persons who failed to stop when flagged by him.

It is strange that it should be necessary to arrest auto drivers in order to get them to protect their own lives!

SOCIETY PROCEEDINGS

Cerro Gordo County Medical Association

Members of the Cerro Gordo County Medical Association were entertained by physicians and surgeons of the Park Hospital Clinic, Mason City, at the hospital, when there were twenty-six members of the profession present. Seven of the men were from out of the city.

Dr. E. Henely, Dr. C. C. Chenoweth and Dr. George L. Roark of Nora Springs, and Dr. A. B. Phillips, Dr. E. L. Wurtzer, Dr. C. E. Wright and Dr. McIntosh Wright of Clear Lake were the men from outside. Dr. Roark is new at Nora Springs, having moved there only recently from Hawarden, and this is the first meeting of the association he has attended. Dr. C. B. Chenoweth is the father of Dr. C. E. Chenoweth, a member of the clinic.

Dr. R. L. Woodward read a paper on Pericarditis, a disease of the heart; Dr. C. F. Starr read one in which he discussed two unusual obstetrical cases. Dr. N. C. Stam gave a talk on treatment of abscesses around the liver and Dr. George M. Crabb told of the bowel obstruction caused by the cutting off of the blood supply.

After the program the doctors were served a luncheon by the nursing staff of the hospital, and spent some time in informal discussions.—Globe Gazette, Mason City.

Hardin County Medical Society

The Hardin County Medical Society met November 10 at the I. O. O. F. Hall. Officers for next year were elected as follows: President, Dr. Mangin, of Iowa Falls; vice-president, Dr. Brunebaker of Hubbard; secretary, Dr. Marsh of Eldora; treasurer, Dr. Wray of Iowa Falls.

The following was the program: Bacteriology

and Serum Therapy of Scarlet Fever, Dr. T. B. Magath, Mayo Clinic, Rochester, Minnesota; Every Day Problems in Management of Scarlet Fever, Dr. M. L. Turner, Des Moines. Paper, Dr. F. P. Moersch, Psychopathic Department of Mayo Clinic, Rochester, Minnesota.

Iowa County Medical Association

The annual meeting of the Iowa County Medical Association was held Tuesday, November 19 in the public library at Marengo. Dr. Irvin J. Sinn of Williamsburg, president of the association, presided and the representation present virtually covered the county. There were seventeen members present, together with several visitors.

The program was one of keenest interest to the profession: Dr. Miller, of North English, Dr. Amick of Millersburg, and Dr. W. Baldridge, lecturer in the school of medicine, University of Iowa, responded to their assignments on the program; every topic brought forth a general discussion, and the queries added greatly to the value of the discussions.

On a call for the election of officers the following were chosen: Dr. H. G. Moershel, Homestead, president; Dr. L. A. Miller, North English, vice-president; Dr. Ciney Rich, Williamsburg, secretary-treasurer; Dr. F. C. Schad, Williamsburg, member of the board of censors; Dr. C. F. Watts, Williamsburg, delegate to state convention.

Mahaska County Medical Society

The regular meeting of the Mahaska County Medical Society was held Tuesday evening, December 1, 1925, in the K. of P. banquet hall, Oskaloosa, where a wild game banquet was enjoyed by the society together with a large number of their medical friends from the surrounding towns.

About ninety doctors and their wives sat down to a sumptuous spread in the K. of P. hall. The menu was especially attractive because of the venison and moose furnished with the compliments of Dr. B. G. Williams, who had just returned from a big hunt in the Hudson Bay country.

Following the banquet, the ladies present were invited to the Rivola Theater while the doctors remained to hear a medical program that proved to be of special importance and interest.

At the close of the session the following motion was passed as follows: "The Mahaska County Medical Society extends a vote of thanks to all who have in any way contributed to the success and pleasure of the evening's entertainment; and especially do we express our appreciation to Dr. B. G. Williams for the excellent venison and moose he has kindly furnished the banquet. We have enjoyed his most interesting account of his big hunting trip into the Canadian woods, 400 miles north of Winnipeg, where he secured the moose and deer.

"We wish also to thank Dr. Eschbach of Albia for his interesting and instructive paper on Preventive Medicine; we also express our appreciation to Dr. Lee Forrest Hill of Des Moines, Iowa, for his able address on Antitoxines and Toxines of Scarlet Fever and Diphtheria.

"We have participated in a veritable feast of good things that has contributed richly not only to our physical but also to our mental well being, equally as well."

E. M. Williams, Sec'y.

Page County Medical Society

The annual session of the Page County Medical Society was held at the State Hospital in Clarinda Thursday afternoon, December 3, at 1:30 o'clock, with vice-president, Dr. J. O. Weaver in the chair. The newly elected officers are: Dr. J. O. Weaver, president; Dr. M. O. Brush, vice-president; Dr. J. F. Aldrich was elected as secretary and treasurer. Dr. A. O. Wirsig was elected as delegate to the state meeting. The program included the following papers: Acidosis and Alkalosis, by Dr. H. McK. Bunch; A Review of the More Recent Progress in Goitre, by Dr. A. O. Wirsig; Medical and Surgical Treatment of Gastric Ulcers, by Dr. M. O. Brush.

Polk County Medical Society

The Polk County Medical Society met for its regular monthly meeting in the Oak Room of the Fort Des Moines Hotel, November 24, 1925. The meeting was called to order by the president, Dr. W. W. Pearson.

The minutes of the October meeting were read and approved.

Dr. W. E. Sanders presented a very interesting case of Primary Cancer of the Lung.

Program

The Treatment of Chronic Ulcerative Colitis As Based on Our Present Knowledge, Dr. J. A. Bargen, Mayo Clinic.

Psychiatric Needs in Des Moines, Dr. A. D. McKinley.

Dr. Bargen's paper was followed by lantern slides of great interest. Dr. J. T. Strawn and Dr. W. L. Bierring spoke on this paper.

Dr. Ely opened the discussion of Dr. McKinley's paper and was followed by talks by superintendent of schools, J. W. Studebaker; county attorney, Vernon L. Seeburger; chief of police, James Cavender; professor R. H. Sylvester, and Dr. Holbrook.

Dr. Ely spoke in reference to the recent death of Dr. Gershom Hill and moved that a committee be appointed by the president to draw up resolutions and send a copy to relatives and place a copy on record. Duly seconded and unanimously carried.

Committee appointed: Dr. F. A. Ely, Dr. J. W. Cokenower and Dr. M. L. Turner.

The secretary announced that the Dr. Lowry of dope fame was not Dr. W. O. Lowery, a member of the society.

The following bills were presented and allowed: Alpha Floral Company, $6; D. E. Moon Printing and Engraving Co., $12.55.

The secretary read a list of the men who might come to this country in connection with Science

Extension. Dr. Blum moved that a committee be appointed by the president to pick out the names of a few of these men to invite to Des Moines. Duly seconded and unanimously carried. The president appointed Drs. W. E. Sanders, Bierring and Fay.

Eighty-five members and thirteen visitors were present at the meeting.

Meeting adjourned at 10:20 p. m.

L. K. Meredith, Sec'y-Treas.

Scott-Rock Island County Medical Societies

A joint meeting of the Scott-Rock Island County Medical Societies was held on October 6, 1925, at the Davenport Chamber of Commerce. The business meetings were held separately Dr. J. W. Richards, Le Claire, Iowa, and Dr. G. W. Lorfeld, Davenport, were unanimously elected to membership. Reports regarding medico-legal defense and regarding the attendance of the delegates to the state meeting were read.

The committee on periodic health examinations reported, after study of the subject, that they would suggest issuance of a questionnaire to the members of the society to get opinions regarding undertaking the work as a society. This was authorized by the society.

Program: Dr. L. H. Kornder, Davenport, gave a talk on Clinical Observations in Europe. One point he made was that formerly there were seventeen medical societies in London. Dr. Osler had succeeded in fusing these into one very powerful organization. He told of other phases of medical practice in foreign countries.

Dr. P. A. O'Leary, head of the department of dermatology and syphilology, Mayo Clinic, Rochester, Minnesota, gave a wonderful talk regarding the Treatment of Syphilis, in which he covered nearly every phase of the present status of treatment of lues. He pointed that consideration was being given to preservation of the resistance of the patient instead of to more radical measures in treatment. He reported on four different systems of treatment that had been carried out in his department. The one giving the best results showed over 25 per cent of recurrences of the disease and in some instances the recurrences ran ovr 40 per cent. This should give food for thought to the man who is treating an occasional case with the idea that he is delivering almost 100 per cent therapy. Dr. O'Leary held his audience of over sixty medical men highly interested for over two hours.

A moving picture reel was shown.

November 4, 1925

The joint Scott-Rock Island County Medical Societies meeting was held at the New Harper House in Rock Island. The election of officers was on motion postponed to the December meeting. Letters from the secretary of the State Society were read setting forth that hospitals were legally not required to admit poorly qualified members of any cult or even of the medical profession to practice in the hospital.

Program: Dr. N. G. Alcock, Iowa University, gave an excellent talk on Some Phases of Renal Tuberculosis, illustrated with roentgenograms.

Dr. Fred Smith, Iowa University, gave a talk entitled, Infectious Endocarditis, giving an excellent summary of the symptoms and clinical findings in this disease.

December 1, 1925

At the joint meeting of the Scott-Rock Island County Medical Societies December 1, 1925, election of officers for Scott county was held resulting as follows: President, Dr. L. E. Shafer; vice-president, Dr. W. H. Meyers; secretary, Dr. P. A. White, (re-elected); treasurer, Dr. L. E. Block; censor, Dr. Geo. Braunlich; delegate, Dr. A. P. Donohoe (re-elected); alternate, Dr. F. H. Lamb.

Forty-two sat down to the dinner, and over seventy-five were present at the program. Rock Island county voted to continue meeting with our society though some of their members had wished to discontinue it. We are having wonderfully enthusiastic meetings with attendance never less than fifty or sixty and we feel justified in asking anyone from any distance to talk to such an audience. Our secretaries alternate in preparing the program, one meeting a month is eliminated, and we are getting an organization that will be ready to accomplish things when the time is ripe.

The annual dinner-dance will be held some time in February to which we are inviting the Rock Island County Society with their wives. This affair is doing much to promote good fellowship and eliminate suspicion and hard feelings. This is the one occasion when almost our entire membership gets out.

Motion was made to indorse and urge upon the county supervisors the building of an Isolation Hospital. Application of Dr. H. H. Rohwedder was read and referred to the censors.

Program: Miss Frances Van Zandt, librarian, State Medical Library, told of the service rendered to the physicians by the Medical Library and had her exhibit of books and magazines on the floor.

Dr. Gatewood of Chicago read a paper, How I Would Want My Ulcer Treated, giving an excellent resume of the indications for medical and surgical treatment, and some of the bad results of each method.

Dr. W. H. VonLockum, Mayo Clinic, Rochester, Minnesota, presented a new piece of research done in conjunction with Dr. Rosenow, entitled, The Prostate as a Focus of Infection. He presented some very striking cases where neuritic, arthritic, myositic, and other focal lesions were present where either the teeth and tonsils were innocent, or had been cleaned up, where removal of the prostatic infection produced remarkable results. His method is to dilate the prostatic ducts by passing a Kohlman dilator and enlarging to thirty-five or forty French then in twenty-four or forty-eight hours express the septic contents by massage. This together with the work being done on the cervix and Fallopian tubes

opens up new fields of attack when the focal lesion has not responded to dental or tonsillar therapy.

Both papers provoked lively discussion by Drs. Rendleman, Senty, Matthey, Lamb, Foley, Hauberg, and Bowser. Paul A. White, Sec'y.

Story County Medical Society

At a recent meeting of the Story County Medical Society, we had our councilor, Dr. Channing Smith, give us a talk. The most of his message to us was warnings to be very particular about the exact observance of the narcotic law. He told us that the enforcement officers, had out a lot of stool pigeons going about the state, appealing to the doctors for narcotics, for various ailments. He described one man in particular, the "man with the false nose", as one who was the most dangerous.

Well yesterday a man appeared at my office, asking me to prescribe for his sick children, that he had lately moved from Boone, Iowa, to Colo, Iowa, and that Dr. Whitehill had recommended me. I did this; then he talked with me about himself. That he had a cancer of the face, that he had been to Rochester and that Dr. Chas. H. Mayo had said they could do nothing more for him, and had given him a supply of cocaine solution, and morphine and sent him away.

He took off his false nose, and truly it was the most distressing thing I have ever seen: nose, upper lip, hard and soft palate gone, and his throat distorted and narrowed until one could not see how he could swallow anything. Just then I happened to think of the warning of Dr. Smith, and I asked him to go with me to the court house to see our Judge Thompson, who is holding court now. He agreed and took the prescription for the children to the drug store to be filled, and then he would return, and go with me. I thought maybe there was some way to arrest him. But he did not return at all, but went to see two other doctors, and as both remembered our warning, and being turned down, and told that we were onto his game he left town on the first train, going east we find.

Now is there not some way to warn the rest of the doctors of the state about this danger? You see there is no defense for a doctor who falls for this man's plea for help. The prescription convicts at once. His case is truly the most pitiful thing I have ever seen, and the most careful might be caught.

Of course we must not get ourselves in a position where we can be accused of trying to obstruct the enforcement of the narcotic laws, and conspiring to do this. Would it do to publish the warning in the Journal? Would letters sent to my friends, be doing this and lay me liable? F. S. Smith, M.D.

P. S.—This condition of the face might be from cancer, syphilis or a gunshot wound with enormous loss of tissue. I did not study it carefully. It was so revolting I did not wish to see more than was necessary.—F. S. S.

Northwest Iowa Medical Society

The Northwest Iowa Medical Society held a meeting at Rock Rapids Thursday, November 5. About sixty were present, some coming from Sioux Falls and southern Minnesota. Sheldon was well represented. An excellent banquet was served at Hotel Marietta.

The following officers were elected for the ensuing year: President, Dr. Lass of Ocheyedan; vice-president, Dr. W. R. Brock of Sheldon; secretary, J. W. Myers of Sheldon; treasurer, Dr. H. J. Brackney of Sheldon.

Waterloo Medical Society

Dr. W. P. Harsha, surgeon to the Illinois Central Hospital in Chicago, was in charge of an interesting clinic for a group of Waterloo doctors at St. Francis Hospital, in which he demonstrated the newer procedures relative to the different forms of hernia.

In the evening he was a dinner guest of the Waterloo Medical Society. The society was also host to a large number of doctors from the surrounding towns and cities. Following the dinner, served in Black's tea room, Dr. Harsha gave a talk.

The Waterloo Medical Society, composed of most of the doctors in the city, meets once a month, holding programs that call for lectures by various leading physicians and surgeons in the country.—Tribune, Waterloo.

Corydon, Iowa, November 30, 1925.

C. G. Throckmorton,
Des Moines, Iowa.

The Wayne County Medical Society held a meeting the latter part of November, at which they decided to organize a close union for collection purposes. One of the things is to make three lists, good pay, poor pay, and deadbeats. Another instruction was to start suit against the county unless the bills were paid in full.

Now I have the impression that this is going beyond our rights and I want an expression from you and must have it right now, because the instructions were to have these matters published this week. Just how far can we go as to this sort of combination for collection of accounts, fee bills, etc., and any other information you might be able to give us as to our rights and the limit to which we can go. Can you answer at once? B. S. Walker.

Clinton, Iowa, December 9, 1925.

C. G. Throckmorton,
Des Moines, Iowa.
Dear Sir:

Referring to the latter written you by Dr. Walker of Corydon, I have to say that a no pay list may be adopted for the use of the members of the Society only. The doctors ought to have their pay in full for treating county cases, and that if they held together, they could. It is of no use to sue for the full amount of their bills, unless the board of supervisors in regular session have authorized such a

bill. The only lawful bill is one authorized by the board of supervisors. In cases of emergency the board may allow a doctor something—it may be only a small sum compared with the amount and value of the services, but the doctor has no standing in court.

The best way to adjust this matter is for the profession of the county to get together and agree on some fee schedule for county cases, take it to the board of supervisors and get an agreement with them that will be fair and work automatically when the board meets to allow bills. A friendly relation with the board is the only successful way. They are custodians of the county money and the methods of distribution are fixed by law, and threats of suits do not disturb them.

Yours truly,

D. S. Fairchild.

HOSPITAL NOTES

A five-story addition to Mercy Hospital, Council Bluffs, costing $200,000 when completed is to be constructed, the preliminary work to be done this fall and the work, in all probability, to be completed next spring, depending upon the financial outlook at that time.—Council Bluffs Nonpareil.

Sioux City Methodist Hospital

The Sioux City Tribune for November 3rd. presents an eight page supplement devoted to the Sioux City Methodist Hospital, erected at the cost of $410,000. The building presents a very attractive appearance and if the interior and equipment is to be measured by the professional character and fitness of the men whose names appear on the staff list, the institution will occupy a high place among hospitals. We are in a position to know something of the training and culture of these men, who are to be responsible for the work at Methodist Hospital and feel that something worthy of the institution will come out of it. Sioux City is favored in having several well organized and well equipped hospitals, and in being so located as to attract high class and progressive physicians and surgeons and representatives of the specialists.

St. Joseph's Mercy Hospital Clinic

Seventy doctors from Fort Dodge and the surrounding territory took part in the second annual all-day clinic at St. Joseph's Mercy Hospital recently. The clinic was held under the auspices of the hospital staff and local physicians presented twelve surgical cases, as well as a large number of medical, orthopedic and pediatric cases, for the observance of visiting physicians.

In a lecture of particular interest, a local physician presented a new method of gall-bladder diagnosis, which was the discovery of Dr. Everett Graham, a teacher in the University Medical School in St. Louis. The surgical cases operated varied from a throat and eye operation to cancer and tumor cases. There was a thorough discussion of the disease of cancer, and the necessity of getting to the public the information that will help them to curb the disease in its early stages.

At the banquet which concluded the meeting, Mayor Findlay told of the early history and work of the Mercy Hospital. The principal address was delivered by Dr. William Rolfe of Waverly, who gave an interesting account of his recent trip to Europe, during which he made visits to the medical centers of the various countries. His itinerary included the birth places of Drs. Lister of Scotland and Pasteur of France, the men who made the practice of surgery safe, as well as prominent living medical men in Europe.

A vote of thanks was extended to the local staff by visiting doctors for conducting these splendid clinics, and there was a unanimous request for the continuance of the meetings as annual affairs.—Ft. Dodge Messenger.

PERSONAL MENTION

Dr. J. L. McElroy of New York succeeds Dr. Bert Caldwell as superintendent of the University Hospital of Iowa City.

Dr. A. P. Donohoe was elected president of the Mercy Hospital, Davenport, staff of doctors at the annual meeting. Dr. C. E. Block was chosen secretary and Dr. R. R. Kulp, treasurer. The executive board chosen is composed of Dr. A. L. Hageboeck, Dr. R. P. Carney, Dr. A. B. Kuhl, Dr. Frank Neufeld and Dr. H. B. Schmidt.

Dr. J. R. Guthrie was elected president of the medical staff of St. Joseph's Mercy Hospital, Dubuque, at their annual dinner and business meeting held Thursday evening. Dr. Palen is the new vice-president, and Dr. Loes remains secretary and treasurer of the staff.

Lieut. Col. James William Osborn of the medical reserve corps and commanding officer of general hospital No. 60 of the Iowa Methodist Hospital has been ordered to report to the headquarters of seventh corps area at Omaha to attend officers' school.

Dr. W. J. S. Cremin was elected president of the St. Joseph's Hospital, Sioux City, surgical staff at the annual meeting of the organization, held at the hospital. Other officers elected were Dr. E. C. Cobb, vice-president, and Dr. E. E. Morgan, secretary and treasurer. Dr. Cremin succeeds Dr. C. P. McHugh, retiring president, who presided at the meeting.

Dr. Richard Hamilton, who graduated from the medical school at Leland Stanford University, in California, has come to Mercy Hospital in Fort Dodge for his interneship.

Dr. Gershom H. Hill, in his will, provided that one-third of his estate should go to Grinnell College of which he was a devoted alumnus.

OBITUARY

Dr. G. H. Hill was born at Garnavillo, Clayton county, Iowa, May 8, 1846, the son of James Jeremiah Hill, who came to Iowa in 1844 and settled in Garnavillo. James J. Hill was born in Phippsburg, Maine, in 1815; prepared for college at Bridgeton Academy and graduated from Bowdoin College in the class of 1838. He prepared for the ministry at Andover Theological Seminary in 1843. In the spring of 1844 he married Miss Sarah Elizabeth Hyde, the daughter of a deacon of the Old South Church, Bath, Maine. Their wedding trip was a journey down the Ohio river to St. Louis, up the Mississippi river to Dubuque by steamboat, and across the country to the village of Garnavillo, where Dr. Gershom H. Hill was born in 1846. In 1849 the Rev. James J. Hill moved to Albany, Illinois, where Mrs. Hill died May 27, 1853. In September, 1854, Rev. James J. Hill married Sarah Wells Harriman of Great Falls, New Hampshire.

Rev. Hill began his ministerial duties at Garnavillo and continued preaching in several places until 1860, when he moved to Grinnell for its educational advantages. His two older sons, Gershom and James graduated in the class of 1871, receiving A.B. degrees. Rev. Hill continued active church duties until the time of his death, October 29, 1870.

Dr. Hill, as already stated, received his A.B. degree from Iowa College (Grinnell College) in 1871 and ten years later the A.M. degree. In 1874 he obtained his degree of doctor of medicine from Rush Medical College, Chicago. In 1878 he pursued a graduate course at Bellevue Hospital Medical College, New York, and in 1890 at Harvard Medical School, Boston. On completion of his literary and medical courses, Dr. Hill began the practice of his profession at Moline, Illinois, until December 1, 1874, when he was elected assistant superintendent of the State Hospital for the Insane at Independence. After seven years service as assistant superintendent, on November 1, 1881, he was elected superintendent, which position he held until 1902, when he resigned and engaged in private practice in Des Moines, as alienist.

In 1905, associated with Dr. J. C. Doolittle, he opened a private hospital for the treatment of nervous and mental invalids. Dr. Hill was fortunate in securing a beautiful old homestead in the residential part of Des Moines, comprising forty acres of woodland and park. In addition to the large and beautiful house erected by the former owner, suitable buildings have been erected for a large number of patients. The institution is now known as "The Retreat". For nearly twenty years this institution has been conducted with marked success. Dr. J. C. Doolittle has been succeeded by Dr. Russell Doolittle.

Dr. Hill has been active in medical society work. For many years he was president of the Buchanan County Medical Society, he was also an early member of Austin Flint-Cedar Valley Medical Society and at one time its president. He was a member of the Polk County Medical Society, a member of the Iowa State Medical Society since 1877, a Fellow of the American Medical Association. In addition to the above named societies, he was a member of numerous special societies, the Des Moines Pathological Society, the American Academy of Medicine, American Medico-Psychological Association and the Congress of American Physicians and Surgeons. Dr. Hill was also a member of the Methodist Hospital staff.

On January 9, 1879, Dr. Hill married Louisa Bliss Ford at Lynn, Massachusetts. Their only child, Julia Ford Hill, was born at Independence in 1886. She graduated from Grinnell College in 1908 and from the Medical School of Drake University in 1913.

Dr. Hill for sixteen years was lecturer on mental diseases at the Iowa State University, and for ten years professor of mental diseases in the college of medicine, Drake University.

Dr. Hill died November 23, 1925, age 79 years.

Dr. Charles Wellington Allen of 2501 Romeo street, Los Angeles, formerly of Ames and Story City, Iowa, for nineteen years, died October 24, 1925, of hemiplegia, following a short illness.

Dr. Allen was born July 17, 1855 in North Hero, Vermont. His education was received in Dartmouth College and the University of Vermont, where he later studied medicine and received the degrees of M.A. and M.D. in 1882.

August 16, 1882, he was married to Angie L. Stewart, and three children were born of this union, Dr. Carlton S. Allen, Mrs. Mary Allen Walker, and Mrs. Gladys Allen Samson, all of Los Angeles.

Dr. Allen practiced medicine in Story county, Iowa, for nineteen years, until he came to California in 1901, practicing actively in Los Angeles for the past twenty-four years.

In January, 1905, his wife passed away. Ten years later, November 26, 1914, he married Mrs. Victoria Iva Fay, who was his good companion and helpmate until his death.

He was a Mason for the past twenty-five years.

Dr. J. M. Carroll of Laurens, died October 31, 1925, after several months of failing health. He was born at Laporte, Indiana, August 25, 1848. In his youth his parents moved to a farm near Iowa City where Dr. Carroll spent his boyhood days. In 1879 he graduated from the medical department of the Iowa State University, and located at Fonda. Soon after he moved to Pomeroy, where he practiced nine years. When the northern division of the Chicago and Northwestern Railroad was built from Eagle Grove to Hawarden, Dr. Carroll located at the new town of Laurens where he practiced to the time of his death (forty-three years). In 1874 he married Eva J. Brock of Manson, who died April, 1921. Dr. Carroll was the pioneer physician of Laurens and saw much of pioneer practice when the practice was real work.

Dr. D. W. Carlisle, an old and prominent resident of Leon, died at his home in Leon, November 5, 1925, at the age of eighty-seven years.

He was the son of a government doctor and Indian missionary in Missouri in pioneer days. Dr. Carlisle was born at Harmony, Missouri, September 17, 1838.

This was the first Mission established west of the Mississippi river. His father was a doctor, a minister, a gunsmith, and a prominent man among the pioneers in the employ of the government, and had charge of the Mission.

Dr. Carlisle graduated from the Keokuk College of Physicians and Surgeons during the Civil War and was an assistant to Dr. J. C. Hughes in the Military Hospital at Keokuk.

Dr. Reinhardt Schwartz, of Charlotte, died November 22, 1925, at Clinton. Dr. Schwartz was born in Clinton county, October 29, 1882, graduated from the Lyons High School, 1902, and in medicine from the College of Physicians and Surgeons, Chicago (University of Illinois), in 1906. For one year he practiced in Mapleton and in 1908 located in Charlotte, where he practiced until the time of his death. He was a member of the Clinton County Medical Society, of the Iowa State Medical Society and of the American Medical Association.

Dr. Charles Orrin Baker died at his home in Ft. Madison, December 3, 1925, at the age of seventy-six years. Dr. Baker was born in Norwich, New York.

BOOK REVIEWS

MEDICAL FOLLIES

By Morris Fishbein, M.D., Editor Journal of American Medical Association. Boni & Liveright, New York, 1925.

Dr. Fishbein is one of the busiest of men, but he has found time to write a most entertaining book on the follies associated with medicine. Being of a philosophical turn of mind and of a profound knowledge of affairs of men, he has presented an analysis of Medical Follies quite beyond the ordinary mind. He has included in his analysis of healing cults, "Osteopathy, Homeopathy, Chiropractic and the Electronic Reactions of Abram's, with Essays on the Antivivisectionists, Health, Legislation, Physical Culture, Birth Control and Rejuvenation".

Dr. Fishbein is too profound a philosopher and thinker to indulge in abuse and expressions of contempt. He knows the human mind too well for that. He knows that human follies are not confined to medical affairs; that illustrations of this fact are to be found on every hand, in truth, to every form of human activity; no less in legislation, to national and international economics, etc. If we were to extend our observations in this direction, we would find no end, therefore Medical Follies are but the natural reflex of the human mind in every field.

It is but natural that we of the medical profession should lay greater stress on Medical Follies than any other, and yet recognize the foundation of all such follies. We are assuming too great a responsibility to dwell upon them and may leave them to others. But we do have a responsibility in presenting the special lines that come under our jurisdiction, and we could have no more capable or more skillful advocate than Dr. Fishbein to present the claims of legitimate medicine. His knowledge of literature, his skill in presentation and his reputation for fairness and honesty, places him above successful adverse criticism. There is every reason for writing this book. Unfortunately there are too many who are unable to present a logical argument in defense of their own cause and are placed at a disadvantage when attempting to set forth the faith that is in them.

It is sincerely to be hoped that every physician will procure a copy of this book for his own information.

THE SURGICAL CLINICS OF NORTH AMERICA

Vol. V, No. 3. (Mayo Clinic Number June, 1925) of 260 Pages, With 115 Illustrations. Price Per Clinic Year, February, 1925 to December, 1925. Paper, $12.00; Cloth, $16.00, Net. W. B. Saunders Company.

This number is of peculiar value in relation to the character of the contributions and of the surgeons who held the clinics. Dr. W. J. Mayo presents one of his philosophic contributions, not speculative, but philosophic, touching the Filtration Phenomena in Relation to Clinical Medicine.

Ulcer of the Stomach and Duodenum, by Dr. Charles H. Mayo. Both of these contributions are short, but to the point.

Dr. E. Starr Judd gives a clinic on Certain Difficulties Presented by Disease of the Biliary Tract. Six clinic cases are given, which serve as texts for discussion of difficulties encountered. Dr. Judd gives an illustrated clinic and discussion on Urinary and Prostatic Calculi. Dr. Donald C. Balfour considers The Management of Lesions of the Stomach Duodenum, with cases and illustrations. Dr. Melvin S. Henderson presents one of his masterly contributions on the Surgical Treatment of Lesions of the Hip and Knee and Non-Union of the Radius.

Dr. William C. MacCarthy considers The Study of Fresh Tissues as an Aid to Clinical Diagnosis, Treatment and Prognosis, in a most helpful manner.

Surgical Treatment of Chronic Lesions of Bone, by Dr. Henry W. Meyerding, with illustrations. We always look for a contribution from that master of technique, Dr. Alfred W. Adson, and we find one under the title, Ramisection for Spastic Paralysis. The remaining contributions are equally interesting and valuable, by Dr. Gordon B. New, Dr. Walter E. Sistrunk, Dr. Jas. C. Masson, Dr. John deJ. Pemberton, Dr. Frank C. Mann, and others. This number of clinics is one of special

value and our regret is that we cannot give special notice to all.

THE MEDICAL CLINICS OF NORTH AMERICA

Volume VIII, Number 5. Octavo of 247 Pages and 21 Illustrations. W. B. Saunders Company, Paper, $12.00; Cloth, $16.00, Net.

The March, 1925, number of the Clinics brings before us a group of Boston clinicians of great merit and calls to our mind the high position which Boston physicians have reached.

The first subject is a discussion on "Some Similarities Between Patients with Pernicious Anemia and Those with Polycythemia", by Henry A. Christian at Peter Bent Brigham Hospital. Followed by a clinic on "Chronic Focal Infection", including a number of rather complicated conditions of unusual interest to practitioners.

The Problem of Rheumatism, by Dr. Channing Frothingham, is one of paramount interest. The following interesting statement is made: "The method of treatment suggested depends to a great measure upon what one's feelings are in regard to the etiology of the disease." There is much of interest in this paper.

Dr. Reginald Fitz presents a clinic including four patients, representing problems in the treatment of unimproved cases. Drs. Richard Ohler and Louis J. Ullian presents a "Clinical Survey of 1000 Cases on Whom Basal Metabolism Studies Have Been Made". Dr. Hermann L. Blumgart gives a study on "Venous Pressures; Their Clinical Significance". Dr. William P. Murphy presents a clinic of five cases on "Diabetes and Coma". "Relations between Uric Acid and Gout" is an interesting contribution by Dr. Hilding Berglund, a subject of considerable controversy at one time or another.

INTERNATIONAL CLINICS

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery and Allied Subjects. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, and C. H. Mayo, M.D., Rochester. J. B. Lippincott Company, 1925.

The first and most interesting paper is under the title of Tait McKenzie's Medical Portraits, by Dr. Henry W. Cattell and presents a number of portraits of distinguished physicians and surgeons with characteristics measured by the portraits. This is an interesting study, worthy of the thought and reflection of the medical mind.

The second contribution is a Discussion of the Present Status of Affections of the Kidney, by I. W. Held, M.D., of New York City. This is a well thought-out consideration of the functions of the kidney under various conditions.

Dr. Rudolph Matas of New Orleans, presents a study on the Systemic Cardiovascular Effects of Arteriovenous Fistulæ. This is one of Dr. Matas' favorite studies and no one can speak with greater authority. Another interesting paper is by Dr. James J. Walsh, on The Patient or His Disease. Dr. Fred H. Albee of New York contributes a valuable contribution on Reconstruction Surgery with illustrations. Both Dr. Walsh and Dr. Albee will furnish valuable, interesting and instructive reading.

A paper of interest to Reserve Medical Officers is by Surgeon General Merritte W. Ireland, on the medical department reserve of the United States Army, in which he sets forth the important facts of the Medical Reserve Corps.

MEDICAL RECORD VISITING LIST OR PHYSICIANS' DIARY

Nineteen Hundred Twenty-Six, Revised. William Wood & Company, Medical Publishers.

Wm. Wood and Company has for many years published a Physicians' Visiting List or Diary. On account of its convenience in keeping a daily record of visits and prescriptions the doctors have always looked forward to its annual appearance, not only for the record convenience but for the many notes of information contained in it.

The Visiting List for 1926 is now on the market.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY

A New and Complete Dictionary of Terms Used in Medicine, Surgery, Dentistry, Etc., With the Pronunciation, Derivation and Definition. Thirteenth Edition. Revised and Enlarged. Edited by W. A. Newman Dorland, M.D. Large Octavo of 1344 Pages With 33 Illustrations, 141 in Colors; Containing Over 2500 New Words. W. B. Saunders Company, 1925. Flexible Binding, $7.00 Net; Thumb Index, $7.50 Net.

The publishers inform us that close watching has shown 2500 new terms added in medical literature. The Dorlan dictionary has so long been an authority that the publisher would no doubt issue a new edition if necessary, to include only the new terms. But the dictionary is so essential to medical students, physicians, dentists and scientific men generally, that frequent editions are necessary. The reviewers need only announce a new edition.

THE CRIPPLED HAND AND ARM

By Carl Beck, M.D., Chicago, with 302 Illustrations. J. B. Lippincott & Company.

This is a very important book prepared by one whose knowledge and skill fits him to speak with authority on a subject of first importance, not only to surgeons in industrial practice, but to the general surgeon and general practitioner.

It is not an uncommon thing to see crippled hands and arms which could have been prevented to a degree, if the practitioner had had access to a guide such as prepared by Dr. Beck. These deformities

(Continued on advertising page xxxi)

BOOK REVIEWS

(Continued from page 54)

are often of such character as to seriously reduce the earning capacity and entail serious loss to the individual, and unnecessary cost to the compensation department.

We cannot too strongly urge the general medical profession to secure a copy of this book and follow its teachings.

HANDBOOK OF PHARMACY AND THERAPEUTICS

The well known Eli Lilly Company of Indianapolis, Indiana, has issued a second edition of their preparations which are so extensively used by the medical profession. Doctors will find this book a convenient reference.

PROPAGANDA FOR REFORM

McFerrin, The Humorous "Diet Specialist"—Charles B. McFerrin describe himself as a "Food Scientist", "Diet Specialist", "Humorist", has his headquarters in Chicago, although he seems to sojourn largely in the South, giving lectures on "food science" and diet and organizing "courses" among women, each member, it is said, paying $15 for the course. Knowing that physicians are opposed to the exploitation of the sick and the near-sick and possibly fearing that he may expect criticism from the medical profession, Mr. McFerrin anticipates the inevitable, and in places where he conducts his "courses", endeavors to placate by telling what wonderful fellows physicians are. He states to physicians that he always discourages the use of worthless "patent medicines" and advises medical examination by the physician at least twice a year. In addition to lectures that are free and the courses and prescriptions that are charged for, Mr. McFerrin has for sale health bulletins. These are a weird mixture of elementary dietetics, quotations from faddists and advertisements of fads and quackery. A good deal of the advertising in the bulletin is devoted to Dr. Charles B. McFerrin himself. It contains advertisements of the Porter's Trufoods, Inc., and the Natur-Way Co., which have occupied the same room in the Chicago office building used by McFerrin as his headquarters. In addition to the sale of courses and individual prescriptions and health bulletins, McFerrin also charges $2 for each letter of information that he writes, which would be cheap enough if the information were trustworthy. Then he has "A Corrective Dietary List" at a cost of $5 and a "Special Diet for the Unborn" at $10. "Dr. McFerrin's Kitchen and Dining Room Chart", printed in two colors, comes at $2.50. But the real big thing is the "Atonement Dietary Service, Dr. Charles B. McFerrin, Founder". An elaborate, two-page questionnaire comes with the McFerrin Health Bulletin. This the prospective patient is asked to fill out and send with a remittance of $5. (Jour. A. M. A., August 1, 1925, p. 376.)

MERCURIAL INUNCTIONS

When routine courses of mercury in the treatment of syphilis are entrusted to the patient, to be reported of course at suitable intervals, the mercurial preparation that now enjoys the highest favor is a carefully prepared ointment. The stomach of the patient is thus spared, and it is not a difficult matter to push the inunctions to the verge of toleration, thus obtaining the full mercury effect.

But most mercurial ointments are greasy, messy and ill-flavored. Moreover, unless they are put up in capsules or otherwise in individual doses, the amount of mercury administered can only be determined by reference to the reduction in the size of the bulk package, or to the number of bulk packages used. These considerations account, we believe, for the professional popularity of cacao-butter blocks containing a definite grainage of metallic mercury.

NEW AND NON-OFFICIAL REMEDIES

In addition to the articles enumerated in our letter of August 29th, the following have been accepted:

Parke, Davis & Co.:
- Corpora Lutea Desiccated—P. D. & Co.
  - Capsules Corpora Lutea Desiccated—P. D. & Co. 2 grains.
  - Capsules Corpora Lutea Desiccated—P. D. & Co. 5 grains.
  - Tablets Corpora Lutea Desiccated—P. D. & Co. 2 grains.
  - Tablets Corpora Lutea Desiccated—P. D. & Co. 5 grains.

Swan-Myers Co.:
- Sterile Ampules of Mercury Oxycyanide, 0.008 Gm.
- Sterile Ampules of Mercury Oxycyanide, 0.01 Gm.
- Sterile Ampules of Mercury Oxycyanide, 0.016 Gm.

Nonproprietary Articles:
- Tetrabromphthalein Sodium (formerly called Tetrabromphenolphthalein Sodium).
- Tetraiodophthalein Sodium.

In addition to the articles enumerated in our letter of September 26th, the following have been accepted:

Lederle Antitoxin Laboratories:
- Concentrated Tetanus Antitoxin (Globulin)—Lederle.
- Scarlet Fever Streptococcus Antitoxin—Lederle (Refined and Concentrated).

Radium Limited, U. S. A.:
- Saubermann Radium Emanation Activator, 100,000 Mache Units.

E. R. Squibb & Sons:
- Rabies Vaccine—Squibb Semple Method 14 Dose Treatment.

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THE DIAGNOSTIC NET—MEDICAL VIEWPOINT*

Frederick G. Murray, M.D., Cedar Rapids

Clinical diagnosis aims at determining the nature of a disease in its early stage. Diagnostic methods that reveal the first or slightest departures from normal health are highly valued and diligently sought: medical research of recent years has gone even farther and elaborated tests for susceptibility to disease, also for disease tendencies and latent diseases—tests that measure the functional capacity of organs and variations in the basic elements of the body tissues and fluids.

The progress of diagnostics is thus seen to be a refining process; a weaving of finer meshes in the diagnostic net to catch the smaller significant features of disease that have hitherto eluded recognition.

One of the most recently perfected tests is that for susceptibility to scarlet fever originated by the Drs. Dick of Chicago.

Briefly—It consists of an intracutaneous injection of the toxin of the scarlet fever, streptococcus. Characteristic redness and swelling at the site of injection at the end of twenty-four hours indicate susceptibility; absence of the reaction, immunity to scarlet fever. Associated with the perfecting of this reaction was the discovery of the specific streptococcus of scarlet fever and of the anti-serum for its prevention and cure; a successful culmination to thirty years intensive research in the laboratories of many of the ablest bacteriologists of this generation.

The Schick test for susceptibility to diphtheria is practically identical with that of scarlet fever.

In close relation to the scarlet fever and diphtheria tests are the hay fever and allied tests; reactions classed as allergy; reddening and swelling of the skin at the site where certain protein substances are scratched in, provided the blood serum of the individual is susceptible to that kind of protein used.

At a slightly different angle of allergy are the three familiar tests for latent tuberculosis, subcutaneous, percutaneous and cutaneous, and the luetin reaction for latent syphilis. While the Wassermann and other complement fixation tests and the Widal agglutination test of typhoid, represent the beginnings of serodiagnosis.

In testing kidney and liver function, special dye stuffs are used which when injected into the blood or lymphatics are eliminated by kidney or liver and the rate at which these dyes may be recovered from the urine or bile measures the functional activity of the organ investigated. Similarly there is being used in cases with toxic edema a test with hypodermic normal saline solution. The rate of diffusion of the injected fluid or the subsidence of the tumor at site of the injection indicating the concentration of the toxins in the blood.

Twenty years ago the disease germ itself held the center of the diagnostic stage; today it is the manifold reactions of the blood serum to disease organisms or their toxins that mainly interest the diagnostician.

Formerly, in blood analysis, the red and white cells alone were considered while now the whole blood is material for chemical exploitation. In search of diagnostic data, the excess or deficiency of various organic components as, blood sugar, cholesterol, acetone and the various non-protein nitrogen compounds like urea or creatin are measured accurately and their quantitative relations to health and disease determined.

For many years the iron of the red blood cell was the only elementary substance considered in hematology. More recently the inorganic elements of the entire blood are being scrutinized for their importance as indices of bodily states. The CO_2 in goitre and acidosis, the chlorids in renal exudative diseases, phosphorus and more especially calcium, and the hydrogen ion concentration, are the subjects of much study in relation to nutritional and metabolic diseases.

*Address of the Chairman, Section on Medicine, Seventy-Fourth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 13, 14, 15, 1925.

Blood chemistry is the field most actively worked at present for diagnostic data.

The scope of physical apparatus in diagnosis has been refined and extended. To x-ray diagnosis of the bones we have added that of the G. I. and G. U. tracts and heart and lung orthodiagrams, definite in outline and perspective. The reaction of motor nerves to galvanism are made to give measurable data in spasmophilia and tetany. To the mercury manometer and polygraph we have added, last but by no means least in bulk, the electrocardiograph, writing out the inmost secrets of the action of the heart itself.

These are but a random few of the more recent advances in diagnosis, the more outstanding contributions of seropathology, bacteriology, chemistry and physics. They serve to illustrate the trend of laboratory research.

These methods and achievements of modern medical research however, have not entirely escaped criticism. The refinements of the laboratory are not without challengers at the present time. It is even charged that the whole status of scientific medicine is impractical and is driving the public to nostrums, cults, and fake systems of healing.

Manifestly nothing could be farther from the truth. All irregular systems of medicine are weakest on the side of diagnosis. Laboratory methods should inspire confidence in all right thinking minds; they have been productive in times past of unassailable advances in the healing art and they link up medicine with the dignity and precision of the imperishable sciences.

A second criticism which gives real concern is that the refinements of laboratory methods are inferior to and destructive of the older established means of diagnosis by intensive individual case study and examination at the bedside. Peculiarly enough more currency is given such comments recently than in some years past. They have been voiced in national gatherings of medical educators and have called forth depreciating denials in recent editorials in the Journal of the American Medical Association.

If it is true that the laboratories are undermining the diagnostic skill of the practitioner the cause lies in the very wealth of new methods turned out. There has been time to digest and assimilate but a few of even the earlier methods; there is bound to be confusion of relative values. They have come too fast for any clinical authority even to get the proper perspective, to appraise and evaluate their relative merits and applicability. The present is probably a boom period in laboratory discoveries in diagnostics. Later on accumulated experience will properly correlate the new with older methods. There was a natural sequence in the old routine of inspection, palpation, percussion, auscultation, mensuration, aspiration, cultures. So will the newer methods fall into a natural order of application following along after the old. Judging from the past, out of the many proposed there will be a considerable number of reliable and workable methods permanently added to diagnostic resources.

In the meantime the safest attitude is cautious acceptance of the new with firm insistence on the paramount value of the older diagnostic routine. A carefully elicited history, thorough bedside examination, and keen observation of the clinical course of disease are, and always will be, the backbone of a diagnosis.

It is inexcusable to slight these for any laboratory device. It is disastrous to delay hours for a culture from a sore throat when inspection of the membrane gives a 95 per cent certainty of the urgent need for life saving antitoxin. It is embarrassing after a long serial x-ray examination, for cancer to be found by digital examination of the rectum. There is great waste in any long negative laboratory examination when a full history would have elicited that most common etiological factor, the fear of disease.

A third line of criticism has thrown a shadow on highly specialized laboratory practice or rather the teaching of it to medical students. It is said to be disorganizing and disintegrating the medical profession. Men high in the councils of medicine point out a great gulf separating the city specialist on the one side with his hospital and laboratory entourage from the "poor general practitioner" on the other, playing a lone hand in a losing game, cutting a sorry figure indeed in the scientific world if such his world can be termed.

That the gulf will continue to widen and the specialized group prosper and the group of rural and family doctors still further disintegrate in numbers and quality is the gloomy and disquieting prediction of these theorists. The remedy proposed is some sort of abridgement of medical education. That the medical curriculum needs radical revising, even considerable shortening, may be admitted; but, if medical training must be abbreviated to keep up the supply of rural and family doctors, the abbreviation should be in some other department than that of clinical and laboratory diagnostic work.

The man who goes out from college into general practice should have the clearest and most comprehensive appreciation of all the resources of diagnosis. Especially do the refinements of diagnosis that deal with susceptibilities, latent

tendencies, and beginning lapses of function fall within the purview of the family doctor.

This does not mean that every practitioner should have his office equipped with an electrocardiagraph, basal metabolism outfit, etc. But who will deny that the family physician should be able to make the diagnosis of beginning heart disease, toxic goitre, nephritis, or any of the diseases where an early diagnosis spells safety, a late one, disaster? If blood chemistry, basal metabolism, cardiagrams, or microscopy are needed to confirm an early diagnosis, it is on the shoulders of the first doctor who treats the patient to see that he gets such needed tests at the clinical laboratory.

But at whose laboratory? This question lies pretty close to the heart of the problem of the rural practitioner and raises the question of a better handling of the diagnostic net. The family doctor in order to get the refinements of laboratory diagnosis must in a measure loose his patient to the specialist with laboratory connections; must take his patient to the other side of the gulf and too often leave him there. Or, to put the shoe on the other foot, the fault may lie with the practitioner who neglects getting his patient the aid of the diagnostic laboratory till advancing disease necessitates hospitalization or other special treatment.

And yet if we take the estimate of the American Council on Medical Education and Hospitals, 90 per cent of all patients could be cared for by the general practitioner in the patient's own home or in the physician's office. Given an adequate diagnosis and only a small fraction of his patients need leave him for treatment by specialist or hospital physician.

In the matter of adequate diagnosis the eminent specialist may render most acceptable and invaluable aid, but as a consultant only, limited by the courtesies of that function, not as a monopolist of the general diagnostic laboratory. There is no good reason for such a monopoly by specialist or consultants except the accident of present necessity.

The specialties are limited lines of treatment for the most part, surgical, mechanical, or for those comparatively few medical cases requiring intensive hospitalization. The specialist needs the laboratory for his own problems of treatment, diagnosis and prognosis in baffling critical cases or for private research in his specialty.

But general clinical medical diagnosis, including especially the determining of susceptibilities, latent tendencies, beginning lapses of function, all these phases of laboratory diagnosis that are being refined and perfected by modern research, should be at the independent command of the general practitioner. He of all doctors has least time to do his own laboratory work. He needs a laboratory service convenient and fitted to help him detect and cope with disease in its embryonic stage.

Just how a first-class clinical laboratory can get itself established in every county seat or even much smaller territorial unit is not clear at present, but there are indications pointing to its possibility.

If a large number of the newer laboratory tests turn out to be as valuable and workable as older proven ones in general use, it will greatly extend the demand for laboratory facilities and make practicable their establishment in smaller centers. The general public is more universally "sold" on the idea of diagnosis than on any other idea in medicine. The independence of the laboratory from all specialists through its control by pathologists and lay technicians in no way competing for his patients for treatment, goes far to popularize it with practitioners. The average patient too, takes more kindly to thorough examination if less closely associated with some inevitable aftermath of surgical or other specialized treatment.

A laboratory, even one of the future, equipped and ably manned for all work short of research would be quite inexpensive compared with even a small public hospital or library. Philanthropy might do well to investigate this field.

But already every sizable town in the state has in its board of health a primordial nucleus for the clinical laboratory of the future and the warrant for its support by public funds: also the state board of health sets a precedent by its long range free laboratory service.

The combination of local clinical laboratory, the family doctor, and local board of health, has possibilities worth considering. It might add to all three something of that prestige which the bench lends to the bar, and promote unity of interest and action in the medical profession at large. It might forestall a worse encroachment of state medicine. It would make possible a more intimate and effective service of preventive medicine to both individual and community—a goal to which the refinements of medical diagnosis seem to point.

HONOR TO DR. ROSENOW

The Ohio State Dental Society, at the sixteenth annual convention at Columbus, December 2, awarded the Callahan gold medal for 1925 to Dr. Edward C. Rosenow, Mayo Clinic, for outstanding contributions to medical, bacteriologic and dental education.

REPORT ON THE TREATMENT OF PERNICIOUS ANEMIA WITH MERCUROCHROME*

P. B. McLAUGHLIN, M.D., F.A.C.S., Sioux City

In presenting this second report on our treatment and findings in pernicious anemia, I wish to reiterate my previous statement made in my preliminary report, written one year ago, that we are not making any pretense for a cure, as the time has been too short since beginning the use of mercurochrome in this disease. Only a little over eighteen months has passed since our first intravenous injection was given. But at this time, we can positively state that we can produce remissions in the disease more quickly and that these remissions are more lasting, than any other treatment we know of. The patients apparently regain their strength and enjoy life. Some of them have taken up their former vocations, and by conserving their energies and being more prudent in their ways of living, are now able to earn a livelihood.

We are also positive that we have found the lesion and the part of the body affected, and have pathological slides showing beyond the question of a doubt, that the disease is an infection. This has been brought about through post-mortem findings done by Dr. Allen C. Starry, and Sister Jeanne De Arc, in the pathological laboratory of St. Joseph's Mercy Hospital.

We have now treated fourteen cases, with two deaths. Most of our cases have had the disease for two or more years. The majority of them have had blood transfusions a number of times. All have had iron and arsenic taken by mouth; some have had subcutaneous or intravenous injections of these drugs. Under this treatment the patients gradually grew worse, and most of them were very low in red blood cells and hemoglobin, when they entered the hospital for treatment.

We have somewhat standardized our treatment, giving all the same care except two who also received blood transfusions. One was so low, and dehydration so apparent, that 500 c.c. of blood was given before the usual treatment was started. The other was a man who was suffering from bleeding hemorrhoids as well as pernicious anemia. We removed his hemorrhoids, and that same night, for some unknown reason, he got up and walked to the toilet; had a hemorrhage while on the stool and fell unconscious to the floor, where he was found by a nurse and carried back to his room. He had lost a large amount of blood, and had to be transfused as an emergency measure, to replace the blood lost by bleeding.

We advise blood transfusion in cases that show a severe dehydration, before giving mercurochrome intravenously, as the drug causes the patient to have a number of watery stools for two, and sometimes three days following its administration, and a serious result is apt to follow where the body fluids are lowered so rapidly.

All our patients are given a very thorough laboratory and physical examination before the treatment is started. A permeability test of the kidneys, with phenolsulphonephthalein, also chemical and microscopic examination of the urine is made.

Mercurochrome is composed of 26 per cent mercury, along with the analine dyes, and as we know mercury in large doses has a tendency to cause an acute white cloudy swelling of the kidneys, we are very careful to see that our patient has no kidney lesion.

The blood is gone through thoroughly. Red, white, hemoglobin, differential, color index estimated, and also a Wassermann run. Stomach analysis is made to determine the presence of hydrochloric acid, and a stool examination to detect the presence of intestinal parasites.

After this has all been studied and passed on favorably, we are then ready for the treatment, which consists of a 1 per cent solution of mercurochrome in from 15 to 30 c.c. doses, given intravenously.

If the patient is below 1,000,000 red blood cells, the smaller dose of 15 c.c. of a 1 per cent solution is given, and the patient watched closely during the reaction. If the patient shows no bad symptoms following this dose, a 20 c.c. dose may be given in from three to five days. After the reaction of this dose has passed away, a blood count is run to note if any improvement has taken place, and if so, we wait about a week before another dose is given.

The action of mercurochrome given intravenously is very striking. In from two to four hours after the dose is given, the patient is usually taken with a chill, accompanied by vomiting in which large amounts of thick glary mucous is eructed. A severe enteritis is set up, with the bowels moving several times, discharging large amounts of glary mucous mixed with streaks of mercurochrome (which is sometimes mistaken for blood). This keeps up for about twenty-four hours. The patient is given all the water he will take during the reaction, to stimulate diuresis and prevent dehydration.

Improvement first manifests itself in a very marked increase of appetite; the patient seemingly not being able to get enough to eat.

*Presented before the Iowa Catholic Hospital Association, Sioux City, Iowa, October 14, 1925.

If the patient shows continued improvement, the second treatment is not given for two or three weeks. This dosage may be increased up to 30 c.c. We have noticed that after the first dose, the reactions are less severe, and the improvement seems more rapid.

All our patients are given a teaspoonful of dilute hydrochloric acid in a glass of water to be sipped with each meal, as we have yet to find a case of pernicious anemia that has any free hydrochloric acid in his stomach contents, at any stage of digestion.

The blood picture of pernicious anemia is, generally speaking, quite characteristic during the active stage of the disease. If the patient, however, is seen for the first time during a remission or a period of improvement, the diagnosis may be very difficult, if not impossible.

During a down period one of the most characteristic features is the lack of relation which usually exists between the decrease in the number of red cells and the loss of hemoglobin. The number of red cells is usually much diminished while the hemoglobin is generally affected to a less degree. Hence the color index or the ratio between the per cent of hemoglobin to the per cent of red blood cells of the normal count, is accordingly increased.

In ordinary cases the red count on first examination is usually below 2,000,000; in many instances the count is well below 1,000,000. Morphological examination of the red cells reveals a marked change in the shape of the cells (poikilocytosis) and also a marked variation in the size of the cells (anisocytosis). Many granular forms of red cells are commonly noted and polychromasia of the red cells is common. Nucleated reds are most always found during the active stage of the disease. During the period of amelioration and in the period between attacks no nucleated reds may be found.

The leucocytes in pernicious anemia are usually diminished in full 70 per cent of the cases. Usually counts of 1,000 to 3,000 are found. A differential count will usually reveal a high percentage of lymphocytes, 45-60 per cent, while in the fatal cases the count may show 60-70 per cent lymphocytes.

The blood platelets are usually diminished. A large proportion of pernicious anemia cases show an absence of free hydrochloric acid in practically every stage of digestion.

All the cases autopsied here, showed some very interesting lesions. The lungs showed no change. The liver showed some fatty change and contained some iron pigments. The spleen was small and showed little change of note. The Malpighian bodies were normal; there was no increase in interstitial tissue.

The bone marrow of the shaft of the long bones was deep red and markedly hyperplastic. Microscopically it contained many red blood cells both normal and nucleated.

The normoblasts and megaloblasts appeared in about equal numbers.

The intestines show the changes as already pointed out in the literature. There was a marked gastroenteritis. The gastric mucosa showed a very marked atrophy of the lining cells, and no oxintic cells could be seen in the small atrophic glands.

The submucosa was markedly thickened and showed marked lymphocytic infiltration, likewise the small and large intestines showed a marked chronic inflammatory change. The mucosa was atrophied and the submucosa showed the same chronic inflammatory change noted in the stomach. The stomach, as well as the mucosa of the intestines was covered with a thick glary mucous.

From investigation and experimentation done so far, and from observation in treating cases by Dr. C. P. McHugh and myself, we have arrived at the following conclusions regarding the etiology of pernicious anemia:

That the primary infection is first located in the mouth, in the form of a glossitis. The focus may be the teeth, the tonsils or perhaps the accessory sinuses. This is first manifest in a very red beef-like sore tongue. After a time it will be noticed that the villa of the tongue have been destroyed and the surface looks as though it had a peritoneal covering, being very smooth and shiny. We believe this infection travels down the esophagus into the stomach, and has a special selection for the destruction of the acid secreting glands and their lining of epithelial cells, which are destroyed, become atrophied, and secrete a large amount of mucous which can be seen oozing from their gaping mouths.

This destruction of nature's barrier of protection, viz., hydrochloric acid, against infectious bacteria entering the intestinal tube allows all forms of microorganisms taken into the stomach through the media of different foods etc., to set up different processes of pathological lesions, such as fermentive decomposition, and autointoxication. This condition generates overwhelming toxins that are absorbed and taken into the blood stream, some of which have the destructive properties of hemolizing red blood cells far in excess of the blood-making organs' power of restoring them, is in our opinion the cause of the profound anemia found in these cases.

THE HYDRONEPHROTIC KIDNEY*

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The term hydronephrosis means a chronic distention of the pelvic cavity of the kidney with normal urine, or, an asceptic liquid derived from normal urine. It necessarily means that there is a dilatation of the collecting portion of the kidney greater than is normally found. Obviously a hydronephrotic kidney may then develop as a result of any type of obstruction to the out-flow or drainage of the urine from the pelvis and calyces. In this short paper only the congenital type of hydronephrosis will be considered, and more particularly the type due to an anomalous or accessory blood-vessel. It is true that any type of congenital deformity of the kidney may be further complicated by the development of hydronephrosis. This is for the simple reason that there is more apt to be deviation from the normal position and size of the calyces and pelvis from normal, which increases the possibility of failure of drainage from collecting portion of the kidney. It can not be emphasized too strongly that it is the failure of complete drainage of urine with the carrying of a small and gradually increasing amount of residual urine that constitutes the real cause of all the pathology.

The part that an anomalous or accessory renal artery plays in the development of hydronephrosis is not completely understood. Anomalous arteries are found as abnormal divisions or distributions of an otherwise normal renal artery or, as is more important in this question, as supernumerary trunks from the aorta. Such abnormal branches may lie in sufficiently close contact with the upper ureter or ureteral pelvic junction to interfere with proper drainage of urine from the renal pelvis. Anomalies of the renal circulation are of common occurrence, in fact much more common than the proved association of anomalous artery and hydronephrosis, though probably a good many anomalous arteries are not demonstrated at operations, as they have become thrombosed and obliterated leaving nothing but a cord which will not be found unless carefully searched for. It seems certain that there are many more cases of anomalous renal artery without hydronephrosis than associated with pathology, and the exact explanation of why in one case a hydronephrosis is produced and not in another is not always easily demonstrated, but the association is too constant to be denied. It is easier to imagine the interference of drainage of the pelvis caused by the contact between artery and ureter or pelvis than it is to demonstrate it. However, the anomalous artery has been recognized as a definite cause of hydronephrosis since 1842, when it was described by Ware, and it has been noted that it is the artery that passes back of the ureter, that is more likely to cause obstruction.

Briefly, the pathological train of events is somewhat as follows: The urine accumulates in the kidney-pelvis and calyces in ever-increasing amount, gradually distending them and compressing the parenchyma of the kidney with resulting reduction of its nutrition and secreting capacity, and producing in turn anemia and atrophy, first in the medullary portion and then the cortex of the kidney. The pathological picture in any case depends on two things: the length of time, and whether infection has occurred or not. It may be accepted as a rule that residual urine will, in time, always become infected, but there is this difference between the residual urine of the kidney and of the bladder that that in the kidney may be present for a much longer period of time before infection occurs. Because of this it is rather surprising to what size the hydronephrotic kidney may distend before infection occurs. In long standing cases without infection, the kidney becomes a large fibrous cyst with a series of pouches representing the original calyces, the walls of these pouches being either thin and translucent or thick and fibrous. Adhesions between the sac and the surrounding structure are common. In the infected cases the picture is more or less the same with added inflammatory reaction and a much more rapid destruction of the kidney substance with the production of much more marked adhesions between the sac and the surrounding structures.

The symptoms of the hydronephrotic kidney vary extremely from practically nothing to the most severe type of renal colic. In the great majority of instances the symptoms are so obscure, and so variable over a long period of time, that they are not likely to call attention to the urinary tract. Probably the best clinical picture to associate with this condition is that of pain, fairly well localized to the vicinity of the kidney, and radiating either forward or backward and exhibiting a tendency to periodically increased severity, which is then apt to be attended with a definite tenderness in the flank. Unfortunately this is not a definite picture and so it is readily understood why the large majority of such cases are apt to be considered as acute low-grade intra-abdominal conditions. This is particularly so because of the likely association of nausea and vomiting and a tendency to develop an ileus. It is

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rather unfortunate that the so-called classical symptoms which are commonly given as an attack of colic associated with a palpable enlargement in the kidney area, both of which signs disappear as a result of abundant discharge of urine which terminate the attack, has been given such prominence as such a combination must be very rarely seen. It is true that typical renal colics occur in the hydronephrotic kidney, as kidney colic is due to distention of the kidney pelvis with retained contents in the kidney, and such colics may be just as severe as those associated with a calculus. Unfortunately the more typical renal colics tend to occur later when there is considerable retention with infection and destruction of kidney tissue. It should be remembered that the hydronephrotic kidney can successfully mimic any intraabdominal condition as far as symptoms go. Urinary findings may point the way to a correct diagnosis, but as remarked before, there is an extreme variation in time before infection may occur in the residual urine. Those that are infected present pus in the urine, which, if found, suggests the necessity of the urological examination. Those that do not present pus naturally open the way to consider the urinary tract negative. It is such a case with negative urinary findings and without definite urinary symptoms that is easily overlooked in the course of a general clinical examination. The pain radiation is not always suggestive of renal involvement, as it is actually radiated anteriorly, just as frequently as posteriorly. As the result of this lack of definiteness the great majority of these cases have previously had abdominal exploration and some type of interference, usually appendectomy, performed. The point is, that in each case of lateral abdominal pain, especially those localized at or above the umbilicus, the possibility of hydronephrosis must be considered.

The only hope of getting at those cases before advanced kidney destruction has occurred lies in the diagnostician, who is suspicious and who urges urological examination. In any abdominal case that deviates in some manner from the typical, it is well to remember the possibility that it may be the urinary tract that is giving symptoms, and to inquire more carefully into the history and to pay more attention to the presence of a few red blood cells or pus cells in the urine. Even in the cases with negative urine there is still a possibility of a mistake. Cystoscopic examination with catheterization of the ureter and a determination of kidney function, and a pyelogram if necessary, offers the best means of arriving at an early diagnosis. As cystoscopy is becoming more common and being better performed, it is becoming more generally realized that it is but a portion of routine examination in certain types of cases. Even if the examination is negative by proving the absence of kidney or bladder pathology, it is apparent that the negative examination, when indications warranted, is just as important as the one that is positive in demonstrating pathology. Attempts have been made to make a pre-operative diagnosis of the presence of an anomalous artery, but it is rather difficult to determine the exact etiological factor by means of pyelography. Fortunately this is not of much practical importance, the main problem being to determine the existence of pelvic dilatation, and to exclude the possibility that the other kidney has a tendency to hydronephrosis with one side only giving discomfort.

Many suggestions have been made, and many types of operations have been attempted, varying from plastic operations on the ureter, to plastic operations on the kidney pelvis; division of anomalous arteries, and attempting to correct the position of the kidney so as to insure better drainage. Plastic operations on the ureter and pelvis, so far, have not been very successful, and the value of the procedure seems very questionable. Part of this failure may be due to the fact that attempts have been made upon the kidney with large hydronephrotic sacs. A kidney with a large hydronephrotic sac capacity has undoubtedly incurred a rather advanced kidney destruction which would render futile any plastic operation. Just where the division point between where it would be justified to attempt plastic repair, and not to, is rather uncertain, and would seem to depend more upon the actual amount of destruction of kidney substance present than upon the size of the hydronephrotic sac. However, the two must parallel each other to a certain extent so that a sac of over four ounce capacity would ordinarily mean that the relative destruction of kidney substance was advanced to such a point that plastic surgery would almost be certain to fail and that nephrectomy, providing there was present a normal kidney on the opposite side, would be the operation of choice. Division of anomalous blood-vessels, even in early cases, has not proven to be routinely successful, as even though the blood-vessel is severed, it seems that the long time pressure has caused either constriction or stasis in that portion of the pelvis and ureter which frequently persists in interfering with the drainage from the pelvis. Probably the most difficult type of small hydronephrosis to treat, is that where no evidence of constric-

tion can be found, and where the hydronephrosis is apparently due to the spastic condition of the pelvis or ureter.

The whole problem is one that still remains open. Too many kidneys that are eventually sacrificed by nephrectomy, should at one time have been treated by more conservative measures. This will probably remain true until correct diagnoses are arrived at before advanced pathology has occurred, as earlier diagnosis will allow of more attempts at plastic or corrective surgery from which the correct type of procedure for the different types of cases may be eventually arrived at.

CONCLUSIONS

1. The hydronephrotic kidney is often missed in diagnosis because it is not suspected and because it can so successfully mimic intraabdominal symptoms. Especially is this true, when the urinary findings are negative prior to infection of the hydronephrotic contents.

2. The treatment of the congenital hydronephrotic kidney is unsatisfactory, as the diagnosis in most instances is made so late that the kidney destruction has reached a point where plastic or conservative surgery can not be considered.

3. Earlier diagnosis should offer more hope that correct operative procedures could be developed to save a certain proportion of these kidneys.

PERINEPHRITIC ABSCESS*

ROBERT H. LOTT, M.D., Carroll

This paper is limited to the discussion of the etiology of perinephritic abscess. The usual accepted classification, given to medical literature by Rogers,[1] 1841, is primary or secondary perinephritic abscesses. Those abscesses originating in the perirenal tissues *per se* being primary; those from the kidney or some other focus as secondary.

Hunt,[2] in a recent partial review of the literature, and of the Mayo Clinic cases fails to find a single case in which primary infection of the perirenal tissues resulted in abscess formation independent of primary renal origin or extra renal origin. He suggests an etiological classification. Such abscesses are renal or extrarenal in origin. Those of renal origin being pyonephrosis, lithiasis, tuberculosis, or traumatic rupture of the kidney. Those of extrarenal origin are metastatic or occur by direct extension. Both clinical and experimental evidence confirm the theory of metastatic perirenal infection by the lymphatics and the hematogenous pathways.

In support of the metastatic origin by means of the lymphatic system, Miller[3] has reviewed the anatomy of the lymphatics of the perirenal tissues showing their communication with the retroperitoneal lymphatics, and also with the lymphatics of the urinary tract and genitalia. However, after arguing in favor of a frequent lymphatic infection from the urinary tract and genitalia, yet of his thirty-six cases of perirenal abscess, only three, in which he believed the source of infection was pelvic, could such a metastatic pathway satisfactorily explain the method of extension to the perirenal tissues.

J. B. Murphy,[4] reported a case which he concluded was probably embolic in orgin, following an abortion. Krymov quoted by Gautron[5] considered perirenal abscess as a suppurative adenitis. The importance of the lymphatic circulation as the metastatic pathway for the infection of the perirenal tissue during postpartum, was emphasized by Gautron. He remarked that the primary urogenital infection may be mild, so much so as to pass unnoticed, and be out of all proportion to the secondary inflammation of which it is the causal factor. Of Kruster's 230 cases quoted by Cumston,[6] only seven postpartum perirenal abscesses occurred. Horsley[7] reported three cases of postpartum perirenal abscesses in which he believed the sepsis had most likely been introduced during parturition, or puerperium, the microrganism being carried to the perirenal tissues by the lymphatics. In passing, it is interesting to note that in all three of his cases the abscess occurred on the right side. Quoting from Hunt, Jordan's case following acute orchitis and Joffe's case following acute gonorrhea, are clinical evidence of the infection of the perirenal tissues from the genitalia by the lymphatic pathway.

Although the lymphatics of the pelvis and of the genitourinary organs afford a metastatic pathway for the infection of the perinephritic tissues, the hematogenous route cannot be excluded. It is generally accepted that during the course of any acute infection, microorganisms find their way in to the general circulation, thus reaching the kidney where many are excreted. If such organisms are few in number, their virulence is low, and the kidneys healthy, their transit through the kidney mechanism will give rise to no demonstrable lesion. But, if on the other hand, the bacteria are numerous, their virulence high, and one or both kidneys diseased, then lesions may be produced which may go on to suppuration.

Brewer,[8] inoculating rabbits with different organisms, found it relatively more difficult to pro-

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duce lesions in healthy kidneys, but if trauma to the kidneys was added, lesions easily followed. Artificial anemia and passive hyperemia were also predisposing factors to renal infections. He was impressed with the difficulty in producing in animals an ascending nephritis which was in marked contrast to the ease with which it was possible to induce hematogenous infection. He concluded that the hematogenous infection was responsible for the greater number of cases of renal sepsis. Even in septic conditions of the lower urinary tract, he thought the concomitant renal lesion might be of hematogenous origin.

Perirenal abscess resulting from direct extension, independent of renal disease is rare. Such may occur from a suppurative process from other organs or tissues either in the abdomino-pelvic or the thoracic cavities. Among these conditions may be mentioned abscess of the liver, suppurative cholecystitis, abscess of the spleen or pancreas, ulcerative colitis, appendicitis, etc. Abscess of the lungs or empyema may result in a perinephritic abscess by rupturing into the perirenal space.

The incidence of perirenal abscess secondary to renal disease varies. Miller, 1909, in a series of thirty-six cases found evidence of renal disease in only four. Braash,[9] 1915, in a series of sixty-seven cases had evidence of renal disease in thirty-eight. Hunt, 1924, in a series of 106 cases from the Mayo Clinic, had forty-seven incidences of renal disease, thus maintaining the high incidence of primary renal disease as noted by Braash. While the usual renal lesions of pyonephrosis, lithiasis, tuberculosis, and traumatic rupture of the kidney, are the causes of a high percentage of perirenal abscesses, yet, the incidence of perirenal abscess in these diseases is low. Hunt, reports from the Mayo Clinic, during a period of ten years, January 1, 1914 to January 1, 1924, the following data. In 742 nephrectomies for pyonephrosis nineteen perirenal abscesses occurred. In 1234 cases of renal lithiasis there were twelve perirenal abscesses. In 644 nephrectomies for renal tuberculosis there were ten perinephritic abscesses. This makes a total of forty-one perirenal abscesses in 2620 cases of primary renal disease.

A limited review of the literature seems to indicate that the largest single factor in the causation of perirenal abscess is the cortical abscess. Braash, in 1915, reporting a series of sixty-seven cases of perirenal abscesses, had twelve, or 18 per cent, which were definitely proven to be secondary to a cortical abscess. In fourteen other cases, or 21 per cent, the cause was not proven. He concluded, however, that these unidentified perirenal abscesses were in all probability due to cortical abscesses. He further concluded that this class of cases is the one which had been classed as primary perirenal abscesses, because the evidence of renal involvement was not ascertained. Hunt, in 1924, also points out the preponderance of cortical abscesses as the etiological factor. In support of his contention, he analyzes 106 cases of perinephritic abscess observed at the Mayo Clinic, during the last ten years. "In fifty-nine (or 55.7 per cent) of the 106 cases there was an absence of apparent or demonstrable primary renal lesion. In five of these fifty-nine cases, single or multiple cortical abscesses were found in kidneys so badly diseased as to require primary nephrectomy at the time of evacuation of the perinephritic abscess. In none was the lesion pyonephrosis, tuberculosis or the result of lithiasis. In twenty-six cases exploration of the kidney revealed the perinephritic abscess in direct communication with a cortical abscess. In the remaining twenty-eight cases, for various reasons, the kidney was not explored at the time of primary drainage and its condition was unknown. However, the recovery of the patient after simple drainage, and the absence of symptoms referable to the kidney are evidence that the source of the trouble was cortical abscess." That cortical abscesses, single or multiple form an important surgical lesion, is indicated by the fact that according to Hunt, 179 or 9.7 per cent of the 1835 nephrectomies performed at the Mayo Clinic, during the last ten years were undertaken because of cortical abscesses.

In 1915, Braash, mentioned the close relationship between peripheral infections and infections of both renal and perirenal tissues. There were the group of cases of perinephritic abscesses which had been regarded as primary because the evidence of renal involvement ascertained by means of data available at operation was necessarily incomplete. To him, it seemed logical, to infer that a small solitary cortical or subcapsular abscess was the cause of these unidentified perinephritic abscesses which had occurred by the hematogenous pathway. Richardson,[10] in a review of cases from the Massachusetts General Hospital, from 1899 to 1913, collected 108 cases of perinephritic abscess supposed to be due to metastatic infection. In thirty-three of these the perirenal abscess was apparently an extension of a cortical abscess.

Cope,[11] 1920, reports three cases of perinephritic abscess following whitlow, and called attention to the frequency of perinephritic abscesses following boils, carbuncles and furunculosis. In 100 of the 108 cases reported by Richardson, the

perirenal infection was preceded by furuncles, carbuncles, paronychiae, local abscesses, acute tonsillitis, or septic wounds. From the data given it seems that we are justified in concluding that cortical abscesses are the most frequent causes of perinephritic abscesses, and that cortical abscesses are of hematogenous origin. The high incidence of perinephritic abscess following the peripheral infections, clinically confirms such a conclusion.

In conclusion, to illustrate this contention, I wish to briefly report a case which clinically at least, was a perirenal abscess of cortical origin from peripheral infection.

Miss B., age seventeen. Past history; she admitted all the common childhood diseases; denied diphtheria and scarlet fever. She had the "flu" in 1918 and was confined to bed one week. She admitted sore throats but denied real tonsillitis. Her menstral history was negative. She had always been subject to boils and furuncles. During the fall of 1924 she had several crops of these. She complained of being weak and of having much backache all the summer and fall of 1924. Present illness; about three weeks before Thanksgiving, she complained of backache and pain in right flank. On Thanksgiving day she had a shaking chill and thought she was coming down with the grippe. There was no frequency of urination; no dysuria, no pain radiating from flank into groin, vulva or thigh; no vomiting. November 30, 1924, she entered the hospital with a temperature of 100⅗, white count of 36,000. A catheter specimen of urine showed just a trace of albumen and only an occasional pus cell. Twenty-four hours later there was no albumen and only an occasional pus cell. She walked stooped and the spine seemed stiff. Bimanually, a mass was palpable in the right upper lumbar region and anteriorly below the costal margin. Tenderness was marked. There was no edema or infiltration of the skin.

On December 2, 1924, an incision made over the mass posteriorly revealed about two ounces of thick yellow pus. There was no colon odor. Cultures showed a pure staphylococcus aureus growth. Although the kidney surface was not actually seen at the operation, by palpation its surface was found to be definitely rough and irregular at its upper pole. Following drainage the patient made an uneventful recovery.

Desiring to know more about the condition of the right kidney, she was cystoscoped December 19, 1924. The bladder showed no inflammatory signs. Both ureteral orifices appeared normal. The right ureter was catheterized and urine collected. Microscopically it showed no pus or red blood cells. The phthalein dye, given intramuscularly, came through well in eight minutes. The pelvis of the kidney accepted only 7 c.c. of the sodium bromide solution. X-ray pictures revealed no signs of stones and the pelvis and calices appeared to be normal. No tuberculosis test made. However the history, course and findings would seem to exclude this possibility.

To us it seems a logical inference to regard this case an example of perinephritic abscess resulting from a cortical abscess, the source of infection being the boils or furuncles and carried to the kidney by the hematogenous pathway.

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Joint Discussion on Papers of Drs. Latchem and Lott

Dr. Nathaniel G. Alcock, Iowa City—It is rather difficult to discuss these two exceptionally well prepared papers when one agrees with everything they have presented, therefore, I will, by repetition, simply emphasize what they have said. I certainly agree with Dr. Latchem in what he has to say about the treatment of hydronephrosis through attempting to do plastic surgery upon the pelvis or ureter or to correct the condition by open operation for fixation of the kidney. I think that those operations have proven that about the only thing they accomplish is to increase the difficulty of the nephrectomy which very frequently becomes necessary later. The hydronephrotic kidney is a hard one to deal with for several reasons. You cannot determine from the function of the kidney at the time you examine it how valuable a kidney it may be. You may have a kidney whose function is almost nil, but which when proper drainage is obtained through dilatation of the ureter or through some unknown correction of the obstruction, will come back to a function that is fairly normal. Furthermore, it is notorious that the comeback of a kidney is sometimes very remarkable. A kidney that from the apparent destruction of kidney substance seems to be worthless may come back and be a kidney that is very valuable. Nowhere should conservation be more strictly applied than in kidney surgery of every kind. Some of these kidneys that have apparently only a thin shell of kidney substance remaining, will give very good function at times. That is shown in cases where we have bilateral hydronephrosis and also in cases of

bilateral pyonephrosis—kidneys which are apparently hopeless, and yet they will function fairly well. All of which goes to show that the treatment here should be most conservative. In the diagnosis of this condition one of the things that misleads us is the absence of urinary findings, and the same thing holds true in cases of perinephritic abscess, in which we expect urinary findings, but in more than half of the cases we are not able to find them. Furthermore, when you do find pus or blood in the urine this does not necessarily mean that the kidney is primarily at fault and is the site of the pathology. We know that in a case of infected appendix we may have pus and blood in the urine simply because of the proximity of this organ to the ureter; and so the ureter, passing by this large abscess, may also become involved in the inflammatory reaction. Therefore you can have blood and pus coming from a so-called ureteritis, and the abscess not be located in the kidney at all. I do not know whether we can go so far as to agree with Dr. Lott on the etiology of many of these perinephritic abscesses. In the first place, in operating upon them it is rather difficult to say that the kidney is the site of the infection, because you do not have a chance thoroughly to examine the kidney, and in most of the cases you hardly palpate the kidney at all. Then again, if these abscesses are the result of cortical abscesses in the kidney, we have a kidney infection preceding the abscess and we know that in many of these cases the symptoms do not come on as insidiously as does a kidney infection. Furthermore, if the abscess is secondary to the cortical abscess (and these abscesses are usually multiple and are a part of an infectious nephritis), then in draining the perinephritic abscess you certainly are not draining all the cortical abscess, but they get well without treatment. I have felt that many of these abscesses are not really perinephritic in character, but are the result of retrocecal abscesses, and in draining them you are only treating the appendix.

Dr. A. G. Fleischman, Des Moines—I am in the same position as Dr. Alcock regarding these two excellent papers. One can hardly elaborate on them any further because the subject has been covered so carefully. However, there are one or two points I would like to touch on, especially from my own experience in these two conditions. First, something regarding the relation of anesthetics to these conditions, particularly the general inhalation type. It has been that general anesthetics definitely depress renal function. As alluded to by Dr. Latchem, practically all of these conditions are congenital, and you are usually contending with the kidneys whose functions are considerably embarrassed. Therefore it is sometimes a question what to do where you have a bilateral involvement. In the last three or four years, since the advent of our so-called regional and nerve block anesthesia, considerable progress has been made in the administration of local anesthesia. In the last year or so I have had occasion to operate on two cases of a bilateral tubercular pyonephrosis, under nerve and field block anesthesia, it is surprising what can be accomplished under this form of anesthesia, without the embarassing complications that usually follow the general inhalation method. Within the last week I performed an extensive exploratory operation on a patient with only one kidney who had lumbar hernia and a fistulous tract as the result of previous nephrectomy. The operation took at least fifty minutes, and at no time did the patient feel any pain. I wish to say something about the operative technic in evacuating contents of pus cavities, the result of pus infection around the kidneys. The surgeon who today boldly plunges a scalpel into a suppurative pus pocket any place in the body and promiscuously spills the contents of that cavity, certainly does not understand surgical principles. How can one expect to obtain primary union of the wound if one carries out such a procedure? In the last two years I have been in the habit of employing a technic which in my experience has worked usually well. And is instead of plunging a scalpel into the abscess, I wall off the region in the neighborhood of the abscess with gauze pads saturated with Dakin's solution, then I carefully insert the trocar within the pus cavity and slowly empty its contents. In that way you will prevent spilling the contents of the cavity everywhere, and invariably primary union will result.

Dr. Lott—I wish to emphasize a point that Dr. Alcock brought out in regard to the absence of urinary findings in cases of perinephritic abscesses. I had always thought of perinephritic abscesses as being secondary to primary renal lesions, as pyonephrosis, lithiasis, tuberculosis, or traumatic rupture, etc., all of which have as a rule urinary findings. But here was a case in which I could not find any pathology in the urine, and at first I was at a loss to make a diagnosis. That was an important point to me. The second point is that these cases do not often follow acute appendicitis, and the literature on the subject does not say much about appendicitis as an etiological factor. If it were common I think we would see examples of such cases more often, because we see many appendicial abscesses and no kidney disease or perirenal abscesses following. Drainage from the appendix is up through the lymphatics and in front of the aorta, and I see no reason why it should not more often result in adenitis and perinephritic abscess, but the fact remains that it does not seem to do so. Most of the literature I have read explains the frequency of perinephritic abscess on the right side as probably due to the lower position of the kidney and therefore not having as good drainage as the left. The lower position also contributes to the possibility of its being more frequently injured, especially in children.

THE PRACTICE OF MEDICINE IN GERMANY

The Prussian state authorities are advising young men not to take up medicine for the next few years on account of the uncertain returns.

INTERPRETATION OF LABORATORY REPORTS*

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The interpretation of laboratory reports is a topic that is becoming more and more important as the precise methods of the laboratory take their proper place in the array of facts that constitute a diagnosis. The early conception of the use of laboratory methods in the diagnosis of disease was that it was to replace all other methods. This is indeed far from the facts but this idea is unfortunately altogether too prevalent even in the present day. The mania for speed, the mania for ease, and the mania for anything but hard work that is today so prevalent in all walks of life is invading the medical profession.

Unfortunately the diagnosis of disease is not becoming easier, and those who have tried to use laboratory procedures as a crutch or a ready made answer for a difficult case have found themselves in a quandary. A real diagnosis is based upon a good history, a thorough physical examination and complete laboratory reports. The part the clinician plays is the correlation of these data. To diagnosis a case upon the laboratory reports alone is as dangerous a method as diagnosing upon the history alone or upon the physical examination alone.

John Hunter, the great English physician, long ago said "Diagnosis by the water (urine) alone is as brittle as the vessel containing it".

To accept or reject laboratory data depending upon whether it agrees or disagrees with a preconceived notion is absurd. There is no mechanical contrivance that can displace or replace real diagnostic ability. Diagnosis is not guess work, and he is the greatest diagnostician who can correlate the greatest amount of data from any available source. The laboratory is one of these sources and it is indeed a very important source of data. But to speak of a laboratory diagnosis is a fallacy. The laboratory does not diagnose. It merely reports its findings. Its findings are in the finding of the infectious agent or some of its products.

DIPHTHERIA

The examination of throat cultures for diphtheria is an effort to find the infectious agent. In theory, every drop of saliva should be teeming with diphtheria bacilli, and every part of the mouth or throat should have them in large amounts. In practice it is found that this is not the case. I have yet to find the technic that will find the organisms in every one of one hundred consecutive cases of diphtheria on first culture. The search is like the search for the needle in the haystack with the chance much against the finding. When the find is made, there can be little question about it, but when the needle is not found it would be a rash statement indeed to say that it was not there.

Finding or not finding diphtheria bacilli in throat cultures is a similar proposition. If diphtheria bacilli are found, that constitutes a very definite finding, and together with a good history and thorough physical examination this laboratory data should bear considerable weight.

If the history and physical examinations are negative for diphtheria, the individual is said to be a diphtheria carrier. This is the standard definition and needs no elaboration. As a matter of academic fact, I can see no reason why a diphtheria carrier should not have pharyngitis as frequently as persons who are not diphtheria carriers. I realize that this is a dangerous doctrine as I hear of deaths every year when this theory is adopted.

With such a set of findings it is far better practice to give the patient the benefit of a liberal dose of diphtheria antitoxin. By following this line of procedure, a life will occasionally be saved that would otherwise be lost.

When diphtheria bacilli are reported as not found, all has been said that can be said; they were not found.

They may be on the culture, they may be in the patient's throat, or they may be in some part of the patient's respiratory tract other than the source of the culture.

The laboratory does not report upon any of these things. It does report that diphtheria bacilli were not found. Like most negative laboratory reports, the report of not finding diphtheria bacilli should carry very little weight. If the needle was not found in the haystack it would be foolish to argue that it was not there.

TUBERCULOSIS

What has been said of the search for diphtheria bacilli might have been said for tuberculosis. The finding of the tubercle bacillus is a very definite finding and usually adds considerably to the evidence from which a diagnosis is made. Only under the rarest of circumstances would it be possible for tubercle bacilli to be found in a specimen from a non-tuberculous individual. The report "tubercle bacilli not found" means only that they were not found. This report should bear very little weight because of its negative character. Think of the patient with a

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lesion the size of a watch in the right apex. All of the sputum or mucus from the patient will not come from the site of the lesion. The particular piece of sputum examined may have originated in the left lung and never been near the site of the lesion. It would be found to be as free from tubercle bacilli as if it were from a person not infected. Repeated negative reports are the only ones that should carry much weight.

Gonococci

The finding of gonococci in pus from urethral smears can mean but one thing. The report of gonococci not found in such specimens means very little.

In old or chronic cases, frequently the history and physical findings could mean nothing else but gonorrhea, but in the examination of the morning drop the characteristic organisms are not found. This should not deter the diagnostician for in such a case the report of gonococci not found is the usual one. This report under these circumstances carries little if any diagnostic weight.

Typhoid Tests—Blood Culture

The blood culture test for typhoid is a very reliable test, especially in the early days of the disease.

The typhoid bacilli can be found in the blood stream in 90 per cent of the cases in the first week of the disease. During the second week, typhoid bacilli can be found in the blood stream in 75 per cent of cases. In 50 per cent during the third week and 40 per cent during the fourth week, the typhoid bacilli can be found in this manner.

The reason is, that the bacilli invade the blood stream early and are slowly eliminated during the convalescence.

Postal regulations forbid the sending through the mail of material suspected of containing pathogenic bacteria in liquid media.

For this reason the outfits for blood culture test for typhoid are kept at the laboratory and sent out only on request and must be returned by express, not by mail.

The test has all the significance that can be given to it by the figures above. It probably would be used more extensively if it were not for the postal regulations.

Widal Tests—Blood Culture

The Widal test for typhoid is a test for a chemical substance in the blood. The increased amount is due to the invasion of B. typhosus into the blood stream. This response on the part of the body is slow in developing. During the first week only 20 per cent of patients have developed sufficient immune substance to give the test. During the second week 60 per cent, the third week 80 per cent, and the fourth week 90 per cent, give the positive test.

It will be seen that the time to use the blood culture test is early in the disease when a large proportion of patients give positive tests. Later in the course of the disease the positive test carries just as much weight as it does earlier, but the negative report loses its weight as a diagnostic point because such reports are so frequent among true cases of typhoid.

With the Widal test just the reverse is true. The positive Widal test early in the disease is highly diagnostic, but the negative test in the first week of the disease has very little diagnostic weight.

As the disease progresses the Widal test becomes positive in an increasing proportion of cases so that during the fifth week 90 per cent show this test.

A negative Widal test, the fourth or fifth week after the onset would be of considerable more diagnostic weight than a negative test during the first week.

Wassermann

It would be impossible to do other than leave a confused idea of the interpretation of Wassermann reports in so short a paper. A few generalizations will however be in order.

The antigen used in the Wassermann test is not of syphilitic origin and therefore the test cannot be specific in the sense that most laboratory reports are specific. As a result of infection with trepenema palladium the lipoid constituents of the blood are altered and this altered state can be identified by the Wassermann test.

Anything else that alters the fat constituents of the blood will likewise have an effect on this reaction.

Ingestion of alcohol, chloroform or ether alters the normal state of the lipoids. These substances are, of course, active fat solvents. This practically applied means that blood specimens should not be collected after an ether or chloroform anesthetic. When the circumstances require that the blood specimen must be taken after the anesthetic instead of before, sufficient time should elapse for the patient to eliminate all the anesthetic and the normal lipoid balance to be restored. This is usually accomplished in forty-eight hours in a well ventilated room.

The patient who has recently ingested an ounce of whiskey will have altered his lipoid balance until the alcohol is oxidized or eliminated. After the ingestion of any considerable amount of al-

cohol the lipoid balance may be disturbed for twenty-four hours.

The ingestion of a heavy meal of fat food frequently changes the lipoid balance. The practical suggestion is, of course, not to draw blood for Wassermann test for four to six hours after such a meal.

The increase of lipoids in the blood during pregnancy has been commented on frequently by obstetricians. This finding is so constant that attempts have been made to use it as a diagnostic procedure. It is not sufficiently constant for this purpose, but it does seriously interfere with the accuracy of Wassermann tests in pregnant women.

Bacterial contamination after the specimen is drawn makes the specimen useless for diagnostic purposes.

The normal daily variation in complement binding power of syphilitic serum is also a factor in apparent discrepancies in laboratory reports.

There are some of the most likely things that would cause the laboratory report to mislead the clinician.

It should be unnecessary to call attention to the fact that patient's blood that is under intensive treatment with mercury and arsenic is unsuitable for Wassermann test. Such specimens give irregular results, depending on which element is in preponderance, the medication or the altered lipoid.

It should be remembered that once the diagnosis of syphilis is made and treatment begun that three years of treatment is just as necessary as it ever was. Wassermann tests made during this time impart no new information regarding the diagnosis and are of little value for any purpose unless the interval from the last treatment is at least six weeks.

SUMMARY

In conclusion let me say that every bit of data bearing on a diagnosis should be available and used.

In general the positive laboratory data are the result of finding something. This usually carries great diagnostic weight.

The negative laboratory reports are the result of the object sought not being found in the material submitted. There are so many possible reasons why the object sought may not be found that the negative reports usually carry very little diagnostic weight.

Only by inquiry into the relative frequency of positive findings by various laboratory methods can we arrive at a clear conception of their real value in diagnostic consideration.

Discussion

Dr. B. L. Eiker, Leon—In connection with the state laboratory, which so many of us use, I want to call attention to the fact that we have several times nearly lost this laboratory because of the legislature rebelling against appropriating money for that purpose. This is a good time and place for me to say that a word from you to your legislators relative to the very efficient work done by this laboratory, would be effective in counteracting any adverse influence that might arise in the future. This laboratory is important to us as general practitioners, to our patients, and to the community it serves. Do not forget that a word from you may help to put the state laboratory over and keep it on its feet. It has been difficult at times to man this laboratory because of insufficient funds. It is one of the most important aids we have, and we should see to it that legislators know that it is important, when they go to the capitol to make our laws.

Dr. James F. Chalmers, Fort Madison—We all agree with Dr. Griswold that a negative laboratory finding does not mean very much. In a case of suspected diphtheria in which the clinical symptoms are pointing toward that disease, I always make a practice of giving 10,000 units of antitoxin before sending in the specimen. If it comes back negative, then sometimes one has some trouble explaining to the people that nothing was found, when they say, "Then the child did not have diphtheria". But people are becoming better educated in regard to these things and we do not have as much trouble now as we did three or four years ago.

Dr. Griswold—I merely wish to add a point relative to Dr. Chalmers' remarks—that the indication for taking cultures in suspected diphtheria is also a good indication for giving antitoxin. In the past many sad cases have come to my notice, in which the results were disastrous because the antitoxin was withheld until a throat culture could be examined. However, in modern practice I think cases of that kind are becoming less and less.

RICKETS*

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Rickets is an old disease. It has been known since the year 2000 B. C., when an example of the disease occurred in an ape which had been confined in a Theban temple.[1]

Seranus of Ephesus[2], in the second century A. D., in giving a complete account of pediatrics in antiquity observed the frequency of crooked limbs of Roman children. Ebstein[3] regarded these as infantile rickets. Epstein[4] speaks (p. 520) of an infantile skeleton at the end of the first century

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A. D. (just before Saranus), excavated at Centirupe and now in the Museum at Syracuse showing indubitable signs of infantile rickets.

Glisson[5] described the disease in 1681 and gave the name Rachitis from the Greek indicating spine and because of its similarity to "Rickets" which was probably a corruption of the Norman-French "Riquets" for deformities. Because of the extent to which the disease was manifested in England and of Glisson's report the disease was called "The English Disease". Rickets has always been a condition to attract the attention of the investigative mind.

Virchow showed that the chief fault in rickets lies in the lack of proper ossification and not to an increased destruction or disintegration of bone as was previously believed. Pommer[6] was the first to clearly describe the physiology of the osseus system in rickets.

The pathology of rickets has been thoroughly established and it offers the criteria by which an unquestioned diagnosis may be made.

The diagnosis of rickets may be made by its pathological findings, its clinical manifestations, its roentgenographic evidences and its serological tests.

It would be unfortunate if the diagnosis of rickets depended solely upon its pathologic findings and indeed few cases would be so diagnosed as the mortality of rickets *per se* is practically nil. However, the study of rickets with its known pathology has been going on over so long a period and has been so sufficiently extensive as to have established its clinical picture. With the disease of an established pathology as rickets not only its clinical diagnosis but its roentgenologic and serologic diagnoses have been made possible by confirmation with its pathologic findings in experimental animal investigation.

It is not the purpose at this time to go into an academic dissertation of rickets as you are all undoubtedly familiar with the condition. There are, however, some features of the disease which have been studied which should be of interest and which it is my purpose to refer to today.

In the history of the study of rickets there have occurred periodically times when the interest in the disease has been stimulated. This has been especially so within the past decade during which time there has been more investigational work conducted than possibly in any like period in this history of the disease.

Several theories have been advanced for the causation of rickets principally among which have been: (a) those of infection; (b) those of diet; and (c) those of hygiene. The first of these was especially sponsored by Moussu[7], Torane and Forte[8] and Kock[9], the latter of whom said that he could produce rickets experimentally. However, sufficient scientific studies have been conducted to discredit any contention of the infectious character of the disease thus leaving the two remaining etiological factors, namely, diet and hygiene as furnishing fields for study and investigation.

The names of certain investigators have been associated with these two causative factors of rickets that any remarks relative to the etiology of the disease must include some reference to them. Guerin[10] and Bland-Sutton[11] appear to be two of the exponents of the dietary cause of rickets.

Guerin[10] fed puppies on meat for four to five months and produced rickets in them while puppies from the same litter were suckled and they showed no signs of the disease.

Bland-Sutton[11] in the Zoological Gardens of London produced rickets in young lions by weaning them early and feeding them on raw meat only and was able to cure them in three months by adding to their diets milk and cod liver oil.

Findlay[12] and Hansemann[13] are two exponents of the hygienic cause of rickets; the former believing that "rickets is due to confinement and lack of exercise", and the latter stating that the "cause could be written down as domestication".

Findlay[14] cites the instance of two dogs belonging to a sister and brother. The brother's dog ran about with him and the sister's dog remained confined with her. By the end of the summer the boy's dog was fine and healthy and the girl's dog showed clinical rickets with curving of the legs.

Hansemann[13] prevailed upon his Japanese students to capture and confine a young wild monkey. After confinement when curvature of the bones took place they were shown to be rachitic according to Hansemann.

While observations of the exponents of these two etiological schools of rickets are of interest there are other observers who have recorded similar results and some whose results do not concur with these. It is because of the varied results obtained that the etiology of rickets is still a matter of much interest.

The etiology factors in the production of rickets whether they be purely dietary or whether they be purely hygienic, they are closely associated in the investigational and experimental contributions here recorded.

In all investigational and experimental work the several diagnostic means are used as indexes for the study. The diagnosis of rickets by its pathology is the most reliable method. But only in experimental animals is this means of diag-

nosis possible. By a comparison with its pathology in experimental animals the diagnosis of rickets has been made more reliable by aerologic and radiologic means. The clinical evidences of the disease do not always concur with the serologic and radiologic findings which is possibly due to the fact that the evidences of rickets secured by these various methods occur at different stages of the disease. The exact order of their occurrence should require further investigation. For example, rickets has been considered as a disease which manifests itself during the second half of the first year. The origin of this belief no doubt is based upon the fact that during the second half of the first year the clinical symptoms ascribed to rickets is noted. Most of the symptoms very likely are the result of a prolonged disturbance. In an article based upon the study of 197 breast fed infants extending over the period of the first year of life it was shown by DeBuys[15] in the follow-up division of his service of the newly-born that the average intensity of the clinical symptoms gradually increased towards the end of the year with the exception of craniotabes which began at four weeks, promptly increased and reached its peak at the sixteenth week, and decreased rapidly to the twenty-eighth week after which time its intensity was insignificant. On the other hand, in another study DeBuys and von Meysenbug[16] showed that within the first twelve weeks of life the blood analysis does not show any changes indicative of rickets. From the twelfth to the twentieth week the blood changes are more pronounced, and after this period there is a gradual return to normal. While these findings coincide with the period of the inception of the individual symptom the intensity of the symptoms continued when the blood returned to its normal calcium and phosphate content.

CALCIUM AND PHOSPHORUS

Calcium and phosphorus are the two chemical elements found to be altered in rickets, so that naturally they have been a source of scientific investigation.

In the study upon the calcium and phosphorus in serum in relation to rickets Howland and Kramer[17] conclude that:

"In non-rachitic infants and young children, the concentration of calcium is from 10 to 11 mg. per 100 c.c. of serum.

"The cencentration of inorganic phosphorus is about 5 mg. per 100 c.c. of serum.

"The constancy of the concentration of calcium phosphorus and bicarbonate in the serum of normal children undoubtedly determines the constancy of the inorganic composition of normal bone.

"During the period of active rickets the calcium concentration may be normal or slightly reduced. The reduction does not seem to depend directly on the rickets. There are reasons for believing that in many instances the reduction is associated with a latent form of tetany.

"The inorganic phosphorus of the serum is regularly reduced in active rickets, sometimes to an extreme degree.

"During the process of healing whether occurring spontaneously or as the result of the administration of cod liver oil the phosphorus content of the serum gradually rises to a normal figure and often somewhat above this. Relapses are accompanied by a fall in the phosphorus concentration of the serum.

"All the children under two and one-half years of age in whom we have found an inorganic phosphorus content of the serum of 3.0 mg. or less have been suffering from active rickets."

Simultaneously Iversen and Lenstrup[18] studied the acid soluble, acid insoluble and total phosphorus in the whole blood and plasma of normal and rachitic infants and found a low acid soluble phosphorus in children suffering from rickets compared with the normal.

Pappenheimer, McCann, Zucker and others[19] showed that:

"Rachitic bone lesions may be produced in rats by a diet containing an excess of calcium but deficient in phosphates.

"Similar lesions follow a diet deficient in calcium but containing an excess of phosphate, the endochondral lesions however are less pronounced.

"A diet deficient in both calcium and phosphorus induces atypical rickets.

"Inorganic salts other than calcium or phosphates seem to be without influence upon the development or prevention of rachitic lesions."

Howland, Kramer, Wang and Fletcher[20] in a study upon the calcium and phosphorus determination in blood plasma in rickets and tetany state:

"In moderate rickets, the phosphorus or calcium or both may be moderately lowered.

"In severe rickets the phosphorus is markedly reduced, even in those exclusively breast fed, while the calcium may or may not be lowered."

Shipley, Park, McCollum, Simmonds[21] in the title of their study ask the question "Is there more than one kind of rickets?" and in their conclusions make the statement that:

"As the result of our experiments we are led to believe that there are two main kinds of rickets. One is characterized by a normal or

nearly normal blood calcium and a low blood phosphorus (low phosphorus rickets); the other by a normal or nearly normal blood phosphorus but a low blood calcium (low calcium rickets)."

Hess and Mazner[22] in their investigation upon rickets in relation to inorganic phosphate and calcium in maternal and fetal blood state that:

"The inorganic phosphate of the blood of pregnant women is approximately normal. The calcium in somewhat diminished at term.

"The inorganic phosphate of the blood of the mother is almost invariably lower than that of her infant at birth. This holds true, although to a less extent for the calcium.

"The inorganic phosphate of the new-born is generally lower than that of the infants one month of age or older. However, even when the percentage was within the rachitic range, rickets was not evident by clinical or roentgenographic examination.

"No relationship was found between the percentage of inorganic phosphate in the blood of the new-born and the occurrence of rickets during the first year of life."

DeBuys and von Meysenbug[16] in the study of the correlation of the clinical, radiological, serological evidences of rickets in the breast fed found:

"That the lower the product (calcium and phosphate) the more frequent were the x-ray findings positive and the greater was the degree of clinical evidences of rickets.

"The positive radiographic findings, the positive clinical manifestations and the abnormal blood changes ran parallel."

Diet

The foregoing serologic studies have shown that there is a disturbance in the calcium and phosphorus in the blood in this disease. These serologic findings have been confirmed at autopsy in experimental animals. The x-ray evidence of the bone pathology gives a definite picture so that with the x-ray and serologic findings established for rickets as a basis is had for the study of the influencing factors upon rickets in the human being.

The effect of diet upon the prevention, production, and healing of rickets has offered a very extensive field for scientific study. A diet defective in its fat content has long been believed to predispose to rickets. It has been noted that the kind of fat to so influence rickets is animal fat. It has been shown that animal fat contains at least one "accessory food" or vitamin, the fat soluble A. The absence of this vitamin has been held accountable for the development of rickets. Cod liver oil is rich in this vitamin. It has been shown more recently that there is another vitamin in cod liver oil which is accountable for the antirachitic property of the oil. It is difficult to say how long it has been known that cod liver oil is indicated in rickets. The association of the name of the oil with the name of the disease is historical.

Von Meysenbug[23] found that there is no reduction in the inorganic phosphate of the breast milk on which infants develop rickets.

DeBuys and von Meysenbug[24] found the calcium content of breast milk to be greater in the mothers of normal infants as compared with the milk of mothers of rachitic infants. They found the calcium content to diminish as lactation progresses. It was also noted that the calcium content of the milk in the colored race was less than in the white.

"Egg yolk possesses marked antirachitic properties for animals and for infants. It has proved itself of great value in protecting infants from rickets during the season when its incidence is greatest, and with this in view can be recommended as a supplement to the dietary comparable to orange juice in the protection against infantile scurvy. It has also curative value but less than cod liver oil, and, therefore, according to Hess[25] should not be relied on for cure except when cod liver oil is not well borne."

Casparis, Shipley and Kramer[26] state that "the addition of one or two eggs a day to the diet will initiate healing, which is usually evident within three weeks after the egg feeding is begun.

"The chemical changes in the blood serum and the roentgenographic changes in the bones are similar to those which follow the administration of cod liver oil.

"The addition of 10 per cent egg yolk to a rickets producing diet will initiate healing of rickets in the rat in six days."

Butter fat has a very feeble influence in protecting animals against the development of rickets-like lesions.[27]

Shipley, Kinney and McCollum[28] showed in experimental rats that ether extracts from alfalfa leaves and ether extracts from clover blossoms are antirachitic and the antirachitic vitamin thus obtained caused healing of rickets in rats beginning on the seventh day of administration and was practically complete in thirty-three days.

The ether extracts of alfalfa are free from calcium and contain only insignificant traces of phosphorus. Ether extracts of cabbage were either negative or doubtful in their antirachitic effect, and the ether extracts of dry spinach, brussels sprouts, cabbage, celery, tomatoes and

sweet potatoes given in amount equivalent to feeding 250 gms. per kilo of ration to animals with rickets were without effect on the rachitic process in the bones.

McCollum, Simmonds, Shipley and Park[29] in their experiment upon the effect of starvation on the healing of rickets, furnish the first anatomical proof of the beneficial effect of starvation on the animal body. They believe that "Rickets has certain of the characteristics of a deficiency disease because of certain substances contained in cod liver oil and elsewhere corrects an anatomical condition which develops when the calcium and phosphorus in the diet are present in wrong proportions. Yet rickets has a feature entirely distinct from beri beri, scurvy, and xeropthalmia. The relation between two inorganic elements determines the extent of the animal's need for the organic factor which cod liver oil furnishes. No such relationship between a vitamin and any other food substance has been clearly demonstrated in any other condition". They[29] have shown that in rats with rickets a period of fasting induces a cessation of the activity of the disease and initiates healing with recalcification of the proliferative cartilage of the bones.

Howland and Kramer as quoted by Cavins[30] have shown this calcification to be accompanied by changes in the inorganic salts of the blood, which changes are concerned only with the calcium and inorganic phosphates. These workers have further shown that there is a close relationship between the deposition of calcium phosphate in bone and the product of the concentration of the serum calcium (in mg. per 100 c.c.) and the concentration of the inorganic phosphorus expressed in the same terms. Their conclusion is that "when the product is below 30, rickets is to be expected, between 30 and 40 it is possible. When the product is above 40 either healing is taking place or rickets is entirely absent."

McCollum, Simmonds, Shipley and Park[27] believe that with diets which are deficient in calcium but which contain a sufficient supply of fat soluble A and have an approximately normal content of phosphorus, rats develop rickets fundamentally resembling human rickets. The administration of cod liver oil when the condition is well advanced is followed by healing of the lesions with the formation of an osteoporotic bone.

An influencing factor which should not be lost sight of is the effect of the diet during the preexperimental period, the first four weeks of life.[31]

Howland and Park[32] and others have shown the radiographic evidences of rickets in the bones and have demonstrated the beneficial effect of cod liver oil by radiograms following the administration of the oil. These changes can be noted at the end of the third or fourth week.

It was generally believed that the fat soluble A contained in the cod liver oil was the causative factor in the cure of rickets. The experiments of Hess, McCann and Pappenheimer[33] in this connection are enlightening. "Young rats receiving a diet complete except for a lack of the fat soluble A vitamin invariably failed to grow and generally developed keratitis. The keratitis developed less frequently when the ration included orange juice. If this diet is continued for a period of months the animals died either of inanition or more often of some intercurrent infection. The skeletons of such rats show no gross changes whatsoever. Microscopic examination of the bones of twenty-two rats on a ration of this character presented definite signs of a lack of active osteogenesis but in no instance lesions resembling rickets. In view of these results and their conformity with our previous experience in regard to infantile rickets we are of the opinion that this vitamin cannot be regarded as the antirachitic vitamin and that if the diet is otherwise adequate its deficiency does not bring about rickets".

McCollum, Simmonds, Becker[34] state: "Although there is no longer any room to doubt the efficacy of cod liver oil in curing rickets the nature of the active principles in the oil is still unknown. It has been stated that the fat soluble A is responsible for the beneficial effect from its administration in this disease. We have, however, published certain evidence which lead us to believe that the protection against rickets which cod liver oil affords is not due to fat soluble A."

Hopkins has shown that this vitamin is readily destroyed by oxidation. Following his lead McCollum and his co-workers[34] oxidized cod liver oil for from twelve to twenty hours at 100 degrees C. by blowing air through it. Oil which was treated in this way did not cure xeropthalmia even though its administration was begun at the onset of the disease when edema of the eyelids was first noticeable. On the other hand it was just as effective in curing rickets in rats as the untreated oil. The bones of rachitic animals which were given daily a curative dose of oxidized oil to the amount of 2 per cent of the weight of the ration (average daily consumption of cod liver oil about 70 mgs.) for eleven days showed quite as advanced evidences of healing as those shown by animals which had received the same amount of unoxidized oil for the same length of time.

The anti-rachitic effect of cod liver oil is not due therefore to its content of fat soluble A but to some other factor which the oil contains.

The existence of this substance which exerts its effects in so remarkable a manner on the growing bones is now as firmly established as is the instance of any of the three hitherto recognized vitamins. From its mode of action and the very small amounts of it which are required to exert its directive influence on metabolism it must, we believe, be classed with this group of essential nutritive principles".

They carried on the investigation further[35] and concluded with the statement: "The evidence set forth in this paper demonstrates that the power of certain fats to initiate the healing of rickets depends on the presence in them of a substance which is distinct from fat soluble A. These experiments clearly demonstrate the existence of a fourth vitamin whose specific property as far as we can tell at present is to regulate the metabolism of the bones".

Light

Hess and Unger[36] have shown that rickets is encountered occasionally when every kind of food is given without exception: On a dietary containing a large quota of milk, therefore rich in fat; on a diet low in fat and the fat soluble vitamin; on raw or pasteurized milk; on a diet of fluid milk, dried milk, condensed milk and human milk. He has found it to occur in one-half of the breast fed infants of the poor, while DeBuys[15] has noted the disease to occur to an appalling degree in those infants exclusively breast fed. It would seem that since the disease occurs with such frequency on a diet supposed to be ideal that either one of the two reasons or both must be given, namely, that breast milk is deficient in the anti-rachitic factor or factors contained in food or that something additional is necessary to exert a favorable protective influence.

Rickets is notably frequent in parts of the world where the amount of sunlight is relatively little as compared with other parts where the amount of sunlight is plentiful. Indeed it was this observation that led Hutchinson[37] to make his observation in India, selecting India because of its excessive sunshine as compared with London's. To quote: "In consequence of the purdah system practiced by the wealthy Hindus and Mohammedans the children of the rich were much confined in airless and sunless rooms not only during infancy but also in the case of girls about puberty when they went to reside in their future husband's house. The poor on the other hand lived in tents and huts and led an open air life. The various articles entering into the diets of the two classes were the same, though they were quantitatively differently distributed". Hutchison found early rickets during infancy and late rickets in the young girl wives prevalent among the rich and very scarce among the poor. His diagnoses of rickets were substantiated by his x-ray findings. It is interesting to record that Hutchison[37] noted great improvement, in fact rapid recovery, in many cases by simply putting the patients in the sun and fresh air. This was noted without any change in the diet and without the administration of drugs.

Huldschinsky[38] (quoted by Meyer[39] in 1920) was the first to institute systematic attempts at the treatment of rickets with artificial ultra violet light (the mercury vapor lamp according to the Hanau system) and the summary of his results with ultra violet irradiations are as follows:

"The therapeutic effect of quartz light irradiation is invariably apparent in all forms of rickets.

"Recovery results more promptly than with any of the methods employed heretofore.

"The effects of irradication are lasting and the regenerative process is active for at least two months after interruption of treatment.

"The duration of treatment embraces (a) from two to four weeks in infants, (b) from one to two months in children aged one year, (c) from two to six months in children aged two to four years, (d) up to nine months in older children". He "demonstrates roentgenographically that calcification of the bone parallels the clinical improvement."

Kramer, Caspiris and Howland[40] showed the effect of ultra violet radiation upon the calcium and inorganic phosphorus concentration of serum in rickets. To quote: "Five children showing clinical evidences of rickets confirmed by roentgenographic examination of the bones, were treated by systematic exposures to the rays from the mercury vapor quartz lamp. This was followed in every instance by healing of the rachitic process of the bones. The inorganic phosphorus concentration of the serum of these children was low (from 2.7 to 3.2 mg.) before the treatment was begun and gradually increased to a maximum of 6 mg. with the appearance of calcium deposition in the bones. So far as could be judged by x-ray healing of the bones following radiation occurred at about the same time as it does after the administration of cod liver oil. The changes in the phosphorus concentration of the serum were identical with those observed after cod liver oil treatment. The pigmented skin of the negro child did not interfere with the action of the light rays. The colored children required no more in-

tensive treatment to bring about healing than did the white children."

Hess and Unger[43] in their interpretation of the seasonal variation of rickets state: "Young rats on a diet low in phosphorus can be protected from rickets by irradiations with sunlight for about fifteen minutes daily. In the winter months, however, this degree of light was found insufficient. The effective rays of the sun, in the intensities studied, did not penetrate window glass. They manifested some protective value after reflection from a smooth white surface.

"Irradiation of a few minutes with the rays of the mercury vapor lamp suffices to protect rats against rickets. This is true likewise of the rays from the carbon arc lamp. A standard protective dose of radiation can be formulated for rats on a standard diet.

"Light is able to prevent the occurrence of rickets in rats fed a rickets producing diet characterized either by a low phosphorus and high calcium content, or a high phosphorus and low calcium content.

"Moderate variations in temperature do not alter the effective action of light rays. Pigmentation of the skin markedly lessens their effect, as demonstrated by the failure of a standard dose to protect black rats."

Hess and Unger[41] in another study of the seasonal variation of rickets further show the beneficial effect of light. Their conclusions are: "Milk from pasture fed cows (summer milk) failed to prevent the development or to decrease the incidence of rickets during the winter. On the other hand treatment with ultra violet rays or with sunlight brought about calcification of the bones during the winter as demonstrated by means of the roentgen ray. These contrasting results lead to the conclusion that hygienic factors, especially sunlight, and not dietetic factors, play the dominant role in the marked seasonal variation of the disorder".

Schultzer and Sonne[42] present a preliminary report on their success in warding off rickets in rats by exposing them to ultra violet ray. "All the rats developed rickets on the McCollum scurvy diet 3,143. The rickets was manifested in three weeks, and was pronounced in four when the rats had been kept in the dark, but there were no signs of rickets in the rats that had been exposed daily for fifteen minutes to the mercury vapor lamp. The phosphorus content of the serum was normal. Exposure limited to five minutes protected to some extent, but not completely. They noted further that the protection afforded by the light was less effectual in black than in lighter colored rats. The effective ultra violet rays seemed to be those with wave lengths between 400 and 280 millimicrons. Even exposure for one minute daily had some influence.

"Sunlight and carbon arc light have a decided action, but the mercury vapor lamp is more potent in rickets."

Powers, Park, Shipley, McCollum and Simmonds[44] in their experiment to determine the preventive effect of sunlight conclude:

"The beneficial effects of the sun's rays were not limited to the skeleton since the condition of the animals underwent a general improvement under the influence of the treatment with sunlight. The effect of the sunlight on the skeleton was a manifestation of its favorable effect only on a single tissue.

"The exposure to the sun rays, however, did not entirely compensate for the defects in the diet. The animals remained undersized, the bones though completely calcified remained thin. Though the sunlight did not alter the defects in the diet it permitted the animals to thrive to a limited extent in the presence of them.

"It is necessary to conclude, therefore, that the sunlight in some way raises the efficiency of the body cells. It enables the organism to put into operation regulatory mechanism which otherwise would have been inoperative or ineffectual.

"The effects of sunlight and of cod liver oil on the growth and calcification of the skeleton and on the animal as a whole seem to be similar if not identical."

These same observers[45] conducted experiments to determine the protective effect of the mercury vapor quartz lamp and were able to prevent the development of rickets in rats. They concluded as follows:

"The beneficial effects of the radiations from the mercury vapor quartz lamp were not limited to the skeleton since the condition of the rayed animals underwent a general improvement.

"The effect of the radiations of the mercury vapor quartz lamp on the growth and calcification of the skeleton of the rat and on the animal as a whole seemed to be similar to if not identical with those brought about by direct sunlight and by cod liver oil."

Shipley, Park and McCollum[21] were able to produce a pathological condition corresponding in all fundamental respects to rickets in human beings in two ways when rats were deprived of certain active light rays: (1) by diminishing the phosphorus and supplying the calcium in optimal quantity or in excess, or (2) by reducing the calcium and maintaining the phosphorus at a concentration somewhere near the optimum.

Hess and Unger[46] were able to obtain results by direct action of the sun's rays similar to those from the ultra violet ray. In their experience "there was marked improvement in the rickets as evidenced by the calcification of the epiphyses noted by x-ray. The alteration resembled that which follows the administration of cod liver oil. The children's general condition was also benefited."

The beneficial influence of sunlight in the prevention of rickets was shown in rats fed upon a diet adequate in calcium but low in phosphorus by Hess, Unger and Pappenheimer.[47] To quote: "Rachitic lesions which develop regularly in rats upon a diet adequate in calcium but low in phosphorus may be prevented by short exposures to direct sunlight.

"This protection is equivalent to the addition of at least 75 mg. of phosphorus to the diet in the form of basic potassium phosphate."

Gutman and Hess[48] showed the curative effect of sunlight which was accompanied by an increase of inorganic phosphate in the blood. They conclude: "It is evident that sunlight not only brings about a clinical cure of the characteristic lesions, but also brings about an increase in the inorganic phosphate of the blood similar to that noted when the cure is accompanied by means of the specific cod liver oil. This observation is of interest both as additional testimony of the curative value of sunlight in this disorder, and as evidence that the curative process occasioned by those divergent therapeutic agents will probably be found to be fundamentally the same. These results establish a chemical basis for the use of heliotherapy in rickets. Furthermore, they furnish the first definite evidence of metabolic changes in the animal body brought about by the solar rays."

The experience of Hess and Unger[48] with the carbon arc light in the prevention and cure of rickets is interesting as they add another therapeutic agent of value. They state: "In this experiment we used the white flame carbon arc lamp because its rays more closely approaches the sun's spectrum, and they were rich in luminous rays. The mercury vapor quartz lamp emits rays rich in ultra violet. Much of the ultra violet rays are of wave lengths considerably shorter than those of sunlight. The carbon arc light used was similar to those employed in taking motion pictures. The children did not experience any tanning." Hess believes "that pigmentation is a non-essential factor in heliotherapy in rickets and argues against Rollier's theory that the beneficial action of sunlight is due to and in accordance with the degree of pigmentation which is produced. There were no superficial burns in this experiment". Hess concludes "that the carbon arc light has been found in the laboratory as well as in the clinic to be a very effective therapeutic agent in preventing and curing rickets. It has the advantage of being comparatively inexpensive, its rays are non-irritating to the skin so that it can be used for hours with perfect safety".

The experiments of Eckstein[49] made on forty-three rats proved "that those animals which had been treated by irradiation from an electric arc light failed to develop rachitis in spite of preliminary deprivation of vitamin A, phosphorus and fat content of their food. The non-irradiated control animals developed rachitic bone changes".

Finally, with regard to the various ray experiments, Hess, Unger and Steiner[50], have shown that the roentgen rays neither prevent nor produce rickets in experimental animals.

Exercise

With regard to exercise in rickets no experimental data is available to warrant any conclusions. Most clinicians advise against too early exercise in rickets, i. e., sitting, standing and walking. In fact this advice was given by Seranus[2] in the second century. On the other hand Findlay[14] advocates the use of electricity and massages as they tend to cause the rachitics to walk earlier; and Marfan[51] advises that the child should not be prevented from standing for a short time and walking a few steps at the beginning of progress toward recovery. It would seem to be more judicious, however, in view of observations made upon the colored race to advise against this plan. These colored children are thrown upon their own resources earlier and consequently sit, stand, and walk at a younger age than do the white children. These colored children also have more rickets and the deformities of rickets in them are decidedly more marked. It would seem, therefore, that until the rachitic process is healed, that exercise either active or passive should be advised against. Further in cases of deformity, attempts should be made to correct them while treatment is in progress so that the deformities may be overcome as the ossification of the bones, the strengthening of the musculature, and general improvement of the individual progresses.

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THE PATHOLOGY AND BACTERIOLOGY OF PUTRID AND GANGRENOUS PROCESSES WITH SPECIAL REFERENCE TO THE FUSIFORM BACILLI AND VINCENT'S SPIROCHETE*

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INTRODUCTION

For convenience, we may divide putrid and gangrenous processes into three large groups so far as their bacterial relationships are concerned. First, there are the gangrenous processes that are caused primarily by the activities of the colon bacillus and related organisms. These processes occur chiefly in connection with the intestinal tract and the genitourinary system. Such processes are common in the appendix, in and about the lower bowel, and about the urinary bladder and the kidneys; also especially in the female about the pelvic organs. For example, a large proportion, possibly 90 per cent of gangrenous appendices is dependent on the activities of bacilli coli. The second group of gangrenous and putrid processes are those associated with the activities of the Welch bacillus and related anerobes. Such infections are frequently gasogenic in character and commonly located in the muscular system and the gastrointestinal system. Frequently the infection results from wounds. This

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group of infections was brought into special prominence during the recent war. The third group of putrid processes is dependent upon the activities of the fusiform bacillus and spirochetes. This third group is a very large group, possibly larger than the first two groups combined. Their distribution is wide, and the character of the process varied, at times being very extensive and at other times being quite insignificant.

A few words concerning the properties of fuso-spirochete organisms will be in order, so that the specific pathogenic reactions of this organism may be better understood. Fusiform bacilli and spirochetes are almost invariably found associated. Not only are these two organisms found together, but they are also found in association with a third organism which is usually one of the pyogenic cocci. The particular pyogenic coccus cooperating with the fuso-spirochete organisms depends very largely upon the location of the infectious process. About the respiratory passages it is some member of the streptococcus group that usually works with the fuso-spirochete organisms. About the genitalia, staphylococci are usually the associated organisms. In the intestinal canal apparently both streptococci and bacilli coli cooperate with the fuso-spirochete combination.

I wish especially to emphasize the importance of this association of organisms in bringing about these pathologic processes, for as a general rule any one of these organisms working alone would not, under the conditions, give rise to the lesions.

The fusiform bacilli comprise a rather large group. They are fusiform in shape, are anerobic, serophilic, stain readily with ordinary dyes, gram negative, and extremely pleomorphic. Ordinarily they can be cultivated readily, though difficulties may be encountered in obtaining them in pure culture. Alone, their pathogenicity is extremely limited.

The spirochetes associated with them seem to belong to several varieties, some being large, others small. Cultivation of these organisms is extremely difficult; apparently some have not yet been grown on artificial media.

The fuso-spirochete organisms belong to a group of bacteria that we have conveniently referred to as opportunists. By this is meant simply that they are organisms commonly found about the body, leading a saprophytic life but with potential pathogenic powers. When certain conditions arise leading to a more favorable environment, they are prone to develop, as a rule, quite rapidly and give rise to pathological processes. In this respect, they are quite like many other well-known organisms, such as the pneumococci, streptococci, bacilli coli, and others.

Normal Distribution of Fuso-Spirochete Organisms

I wish to refer here to a fundamental principle not sufficiently recognized in connection with infectious processes: namely, the distribution of infectious processes in the body is very largely determined by the normal distribution of the opportunist organisms causing such infections. For example, the normal habitat of staphylococci is the surface of the body, especially the skin surfaces, and we know that most staphylococcus infections occur on the skin, in the skin, or in adjacent structures. Even though staphylococcus infections occur in the interior of the body, upon analysis it usually can be shown that the organisms came more or less directly from the skin.

So also with streptococci; these organisms normally occur in the throat and upper respiratory passages and most streptococcus infections appear in these localities.

Fuso-spirochete infections furnish a very striking illustration of this principle. We have in our laboratory made a special study of the normal distribution in the body of these organisms and find that they occur chiefly in four localities; first, they are commonly found in the crypts of the tonsils; second, they occur in large numbers on and about the teeth; third, they are frequently found normally in the intestinal canal in the region of the appendix and caecum; and fourth, they are found normally about the genitalia, in the male in the preputial sac, in the female about the clitoris. In studying the distribution of infections by these organisms, we find that such processes occur chiefly in or near these four localities above mentioned.

In the tonsil crypts, these organisms occur in two forms: first, diffusely distributed over the epithelium; and second, in definite small caseous granules. These granules occur in about 30 per cent of all tonsils that are extirpated. Probably everyone with tonsils have them at times in the crypts. They are usually multiple. They are gray or greenish-gray, small, little, radiate and have a peculiar offensive and characteristic odor. Ordinarily they do not penetrate the epithelium but remain localized, frequently causing cyst-like dilatations of the crypts. When examined microscopically, these granules reveal at their margins small extrusions which have a structure resembling an ordinary test-tube brush. There is a central shaft made up of one or more filaments, and arranged perpendicularly thereto are innumerable fusiform bacilli and spirochetes. Scattered throughout the granule are many coccal forms, especially streptococci, both hemolytic and viridans.

On the surface of the teeth near the gingival margin, similar granules occur. When examined under a microscope they present a somewhat ray-like appearance with similar brush-like protrusions at their margins. Smear preparations of this material reveal many fusiform bacilli and spirochetes as well as streptococci and buccal leptothrix.

Relation to Infection

I will now take up especially the pathological processes that are caused by these organisms and in doing so I will discuss lesions in various localities of the body, beginning with the structures about the head. One of the most typical lesions caused by these organisms is known as Vincent's angina. This lesion appears usually first upon the tonsil or nearby surfaces, and, indeed, very frequently about the edges of the tonsillar crypts. There are two anatomic forms of Vincent's angina, one where the lesion is superficial and not associated with much odor; the other is deep and destruction of tissue is more or less characteristic. The latter is usually very fetid. Examination of such lesions reveal large numbers of fuso-spirochetes. Indeed, at times the organism appears in practically pure cultures. Often, however, pyogenic cocci also appear. The question has arisen as to the source of the fuso-spirochete organisms in this disease. This condition at times appears as distinct epidemics, and in these cases it would seem that the transmission is direct from person to person, as in diphtheria. Other cases appear to be distinctly sporadic and from an examination of the tonsils it would seem that fuso-spirochete organisms from the crypts of the tonsils or possibly from the teeth for one reason or another become pathogenic and cause a localized infectious process.

Ulcerative gingivitis years ago was shown by Gilmer and Tunnicliff to be caused by fuso-spirochete organisms. In this disease apparently when proper predisposing factors are present, these organisms, which normally occur about the teeth, grow rapidly on the buccal mucosa and cause a dissolution of tissue, resulting in a lesion somewhat similar to the lesions above described on the tonsils.

Moorehead and the writer have recently shown that these organisms are frequently found in the exudate obtained from chronic alveolar abscesses. They are practically always associated with streptococci, usually the streptococcus viridans. It is the fuso- spirochetes that are largely responsible for the solution of the tissue and for the putrid character of the exudate. For example, in twenty cases of chronic apical abscesses, the fusiform bacilli and streptococci were found in all, and spirochetes were shown in association in sixteen. Undoubtedly, in this common condition, the streptococci are the aggressive organisms and may have been the primary agent, the fuso-spirochete organisms entering secondarily but modifying materially the character of the process.

Also in pyorrhea alveolaris and other similar lesions about the mouth, fuso-spirochete organisms are commonly found in large numbers usually growing with pyogens. It may be true that they are at times primary agents, but probably in most instances they are merely secondary invaders taking advantage of certain factors such as vascular disturbances, associated infection, foreign body deposits, diet deficiency disease, etc.

In putrid otitis media, fuso-spirochete organisms are nearly always responsible for the fetid character of the discharge. Usually the otitis media is primarily a coccal affair. When the fuso-spirochete organisms invade the ear secondarily, the exudate quickly becomes putrid in character. The bone may or may not be involved. At times, the fuso-spirochete organisms invade the various sinuses of the head, and so occasionally we have a putrid sinusitis, ethmoiditis, and so on.

Pilot has recently investigated a large series of pulmonary lesions of different kinds including pulmonary abscess, gangrene, and bronchiectasis. The bacteriology of these lesions centers largely around the presence of fuso-spirochete organisms and streptococci. Thirty-seven cases of such infections were studied. The bacteriologic, pathologic, and clinical studies indicate that this type of infection forms a distinct clinical entity. The process as a whole may be referred to as a fuso-spirochete pneumonia, though pyogens nearly always play an important contributory roll.

The lesions are largely in the form of simple or multiple abscesses together with a diffuse form of gangrene. The development of these processes in the lungs depends to a large extent upon such factors as tonsillectomy, general anesthesia, aspiration of foreign bodies, perforating lesions in the trachea, bronchial carcinoma, tuberculosis infections of different kinds, especially pneumococcus infections, and also upon circulatory disturbances of various kinds. In a few, typical gangrene of this type may develop without evident predisposing causes. It is interesting to know that probably in all cases, the sources of infection relate back to the mouth or throat where the fusiform bacilli and spirochetes normally grow. The prevention, therefore, of these pulmonary infections would appear to lie largely in the proper hygiene of the mouth.

In pulmonary tuberculosis, it is interesting to know that infections with fusiform bacilli and spirochetes are rare. However, occasionally the association of these organisms with the tubercle bacillus does occur, resulting in a diffuse putrid gangrene superimposed on the tuberculous process. In our series, five such cases were studied. These seem to occur more commonly in those patients who have been particularly careless as to mouth hygiene.

Brams, working with us, has directed his attention especially to the occurrence of these organisms about the genitals of the male. Under normal conditions, he found that they occurred in the preputial secretions of 51 per cent of one hundred men. Other organisms commonly associated with them are staphylococcus, streptococcus hemolyticus and colon bacilli. A comparative study of the flora of the normal preputial secretions and the secretions from cases of gangrenous balanitis reveal a striking similarity in both smears and cultures. The conclusion has been drawn from this study that in gangrenous and erosive balanitis the usual source of the fuso-spirochete organisms is in the normal flora of the preputial sac and not as formerly thought in the buccal secretions. Fusiform bacilli and spirochetes were also found in the normal smegma of twenty-one of thirty-six pregnant women. They appear quite like the organisms found in the preputial secretions of men. Infections caused by these organisms have been known to occur in women and presumably the source of such infections is also in the smegma of that locality. In both male and female, predisposing factors are important in determining these gangrenous lesions of the genitalia.

A considerable amount of investigation has revealed the not uncommon presence of these organisms in the intestinal canal. It would appear that a small proportion of gangrenous appendices, not over 5 per cent or thereabouts, have been the result of the activities of the fuso-spirochete association. Here too, as in other localities, predisposing factors such as foreign bodies, associated infections, vascular disturbances and the like operate in permitting these organisms to grow.

It has long been known that serious skin infections of a gangrenous character resulted from bites of individuals, especially individuals having dirty mouths. On investigation, it has been shown that fusiform bacilli and spirochetes usually along with cocci are found in large numbers in such lesions. No doubt these organisms in these instances have been directly introduced by the biting process resulting in a serious type of infection.

Animal Experiments

For experimental production of putrid and gangrenous processes with these organisms, we have found the rabbit especially suitable. Introduction of the material under the skin in suitable amounts in the region of the neck or directly in the pleural cavity will result in the formation of a putrid process, the fusiform bacilli and spirochetes being present in the exudate. The presence of associated cocci, especially streptococci, is no doubt an important factor in determining the progression of the process. The cocci appear to be more aggressive, advancing into adjacent tissues, whereas the fusiform and spirochete forms follow later and cause the gangrene. If the dosage of organisms is large enough, the rabbit will die within a few days and at the site of injection will be found extensive putrid processes. If this is the pleural sac, the entire cavity may be filled with a stinking exudate, the heart and opposite lung being compressed to one side. Putrid empyemas may readily be produced in a rabbit by the introduction of such material as the tonsil granules, tartar from the teeth, and pleural exudate from pulmonary gangrenous empyema.

Prevention

In discussing prophylaxis, I must again refer to the principle enunciated in the early part of this paper, namely; that the distribution of infectious processes caused by these organisms is largely determined by their normal habitat. In order to lessen the number of these infections, it would appear reasonable to diminish as far as possible the number of these organisms normally present about the body. While it may be out of the question completely to disinfect for example the mouth or the tonsils, the number of bacteria there may be greatly reduced by various procedures. We now appreciate that diminishing the dosage of bacteria is an important factor in prevention. Removal of the tonsils and draining of the crypts containing these fuso-spirochete granules are rational procedures to pursue. Frequent cleansing of the teeth, especially between them and about the gums, removal of tartar and pus pockets and in general establishing a clean and healthy mouth would clearly be indicated in this connection. It would appear reasonable to exercise special precautions in persons about to undergo anesthesia for any purpose especially in tonsillectomy or operations about the mouth or throat. About the genitalia in the male, frequent cleansing of the preputial sac would appear to be practically a sure prevention, and in females the

parts about the clitoris should receive particular attention. Circumcision is a sure preventive measure against this type of infection.

TREATMENT

In relation to treatment, I will merely say that at the present time many of these cases all over the world are being treated with arsenic largely in the form of arsphenamine. For a long time it has been noted that such preparations appear to have a favorable effect upon these infections. Our studies have been largely of a pathological and bacteriological nature and only more or less incidentally have we taken up the treatment of these conditions. On the whole, we have noted several strikingly favorable results following the administration of arsphenamine in bronchiectasis and other pulmonary conditions. Pilot has noted diminished expectoration, disappearance of foul odor of the sputum, less fever and other favorable signs. Of course, old anatomic defects can not be greatly changed. It is evident that the infection should be treated with arsenic as early as possible, and selected cases should receive arsenical treatment before more radical surgical procedures such as pneumothorax are employed. In many cases, it may be well to combine surgery and arsphenamine in the treatment.

A DISCUSSION OF SURGICAL CASES IN THE LOWER ABDOMEN AND PELVIS*

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Every physician is practicing surgery in some form. The nerve specialist who does a lumbar puncture or the internist who uses a needle to draw off a pericardial effusion is doing surgery of a rather high order. The simple painting of iodine on a scratch is surgery that has saved many lives. Surgery is now so well standardized that the practice of it is becoming easier every year. Eighty-five per cent of diseases are treated surgically according to Harvey Cushing.

The first case I want to report is one of ulcerative colitis. This girl was fourteen years old when she first came under observation. Up until twelve years of age she had been very strong and healthy, rather of the masculine type. She had had an obsession for eating the lead in pencils. For two years she had been passing blood and mucus in the stools. This gradually grew worse each month. Her mother took her to a physician and he said it was hemorrhoids so they paid no further attention to it. Along with the bloody stools there was more or less diarrhœa. As these symptoms grew worse she had more pain. Her general health was not impaired until we took out a gangrenous appendix. At the time the appendix was removed I did not know it was an extension of the process from the colon. I can find the report of no other case of ulcerative colitis when the appendix was involved in the process. From the time her appendix was operated she lost rapidly. She had a high leucocyte count

Mucous Colitis

with fever every evening. A roentgen ray of the colon made the diagnosis. The picture showed a greatly narrowed, moth-eaten, scarred, distorted colon, worse in the lower portion, growing more normal as the process extended upward. By this time she was having from fifteen to twenty bloody stools a day with a large amount of pus and mucus. After trying high colon irrigations with no results we did a cecostomy under local anesthesia using a large rubber tube. Through this tube we irrigated the colon twice a day with various solutions, but mostly boric acid. She grew gradually weaker, the fever going up to about 102 every afternoon, and finally died from exhaustion. Post-mortem examination showed only an ulceration of the mucous membrane of the colon with a tendency to recovery. There were large areas in the colon that contained no mucous membrane at all. The muscularis mucosæ was not disturbed at all and this explains

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why these cases never perforate and have a tendency to heal. From the fever, the leucocytosis and marked anemia (hemoglobin 15 per cent), I had thought we might find an abscess in the liver or somewhere in the abdomen but there was no tendency to abscess formation anywhere. If I had this case to go over again I think I could cure her. The only treatment in these cases is to do an ileostomy putting the colon completely at rest. Then they will recover. Otherwise treatment is of no avail.

Mucous Colitis

The next case is that of a young man, twenty-four years old. He had been ill for three weeks before he came under our care. For thirty-six hours before he came into the hospital he had been vomiting incessantly. His abdomen was very much distended with a history of passing no gas or feces for the past thirty-six hours. There was some fever, with pulse fast and very weak. He was in shock. For years he had been taking soda, off and on, for his stomach, so we first considered a ruptured gastric or duodenal ulcer. This we ruled out by further examination and observation. He had been complaining of pain in the upper left quadrant of the abdomen for about a week. At this time he was passing bloody urine. One physician that saw him diagnosed a left-sided renal colic. His leucocyte count was over twenty thousand. On examination the abdomen was hard and distended. We were unable to make a diagnosis before operation, but we thought we were dealing with a peritonitis, probably due to a ruptured appendix. As soon as the abdomen was opened, a clear, straw colored fluid came out in large quantities, probably as much as two gallons. Then we considered a tuberculous peritonitis. First we looked at the appendix and took it out. It was acutely inflamed but not the seat of the trouble. Then we looked all over the abdomen for tuberculosis or for any malignant growth. Everything was negative. We closed the abdomen without drainage. The fluid from the abdomen proved negative to culture and examination. Three days after the operation he began to have pain on the lower left side of his chest. Next day there was a rub there and on the following day he developed pleurisy on the right side. In three or four days he had developed a pleurisy with effusion on both sides. About one quart of a clear, straw colored fluid was removed from each side. This fluid was also negative to culture. Now to go back over the case. This man had been exposed to the cold and wet, doing work which he was not accustomed to doing. He became very fatigued. With this he developed an acute tonsillitis. In a few days he noticed he was passing nearly pure blood from his kidneys. The enormous ascites was due to the diaphragmatic pleurisy causing a localized peritonitis with a large ascites. Taking these symptoms as they developed, fatigue, tonsillitis, diaphragmatic pleurisy pains, hematuria, ascites and later a double effusion of the pleura, it is easy to see that we are dealing with an acute multiple or poly serositis and an acute hemorrhagic nephritis. The germ was most likely a hemolytic streptococcus. Recovery was uneventful.

The next case was a boy, eleven years old. When I first saw him I diagnosed a ruptured appendix, from the tenderness and rigidity in the lower right abdomen, leucocytosis, fever and vomiting. He had passed no gas or feces in the last twenty-four hours. At operation, the appendix was acutely inflamed but it was evidently not the cause of the trouble. By the time I had removed the appendix I had decided to make another incision over the pylorus. We did this and found a ruptured gall-bladder, filled with stones. Some of the stones had escaped into the abdominal cavity. The opening in the gall-bladder was enlarged, the stones quickly removed, the gall-bladder drained, also the region around the gall-bladder, and the wound closed. Some authorities would claim this gall-bladder should have been removed but I will never subscribe to this procedure. "Get in and get out" is the best

motto. He made a prompt recovery. The boy had had typhoid fever the year before.

There is a direct relationship between cases of infantile paralysis and tuberculosis of the intestines. The following case will illustrate what I want to prove.

A girl, ten years old, had had infantile paralysis six years ago. There was a history of repeated attacks of pain over McBurney's point. On examining the abdomen, we could feel a mass roll under our fingers, in the region of the appendix. The next day we opened the abdomen but could find no mass as we had felt the day before and very little trouble in the appendix, which was removed. In a few months she began to have the same kind of spells that she had had before operation. This meant we had not found the trouble at our first operation. About one year later she was brought to the hospital in a very grave condition. There was a mass in the lower right quadrant as large as a child's head. She had been vomiting for two or three days. She had a temperature of 102 with a rapid, weak pulse, passing no gas and no feces. We made a diagnosis of an intestinal obstruction and did a colostomy on the left side. The mass on the right side we drained which contained a large amount of pus. She soon began to improve but the fever and diarrhoea kept up all the time. In three months we went in to close the colostomy and found the entire abdomen studded with tuberculous areas. She lived only two or three days after this. I have had three other cases of infantile paralysis showing tuberculosis of the intestines. Appendicitis is also more common in infantile paralysis than in other people.

In one year, we had three cases where we diagnosed intussusception in children. From the history, the first case had been intussuscepted for not over twenty hours. At operation the diagnosis was found correct, but in the mesentory of the adjacent intestines, were twelve or fifteen glands varying in size from a pea to a filbert. The glands were as hard as cartilage almost. In the next case of intussusception, we found the same thing. In the third case, we made a diagnosis of intussusception but at operation the obstruction was due to enlarged glands, in the mesentory of the ilium. It proved later to be a flu condition. The child developed broncho-pneumonia and died five days after operation. I posted the case and found the enlarged glands had returned to almost normal. They were removed and submitted to microscopic examination and it was found to be only a round cell infiltration. I submitted these case reports to Prof. Hektoen and he said he thought glands could develop in a few hours with these characteristics. In intestinal influenza I think we should consider the possibility of an obstruction due to these glands.

One of the most interesting chapters in abdominal surgery and one I think that is not well understood is the one written about the cæcum. Lane was one of the first to study the ileo-cæcal region. Wilms, Waugh, Gray and others have described the symptoms that are associated with a mobile cæcum. Waugh describes five types of mobile cæcum. They are, the gastric and duodenal ulcer, renal and biliary colic and right iliac fossal type. He says when one operates for these five conditions and finds them negative and then finds a mobile cæcum he gets good results by immobilizing the cæcum.

The removal of an innocent appendix for pain and discomfort in the lower right quadrant, has probably done more to bring abdominal surgery into disrepute than any other one thing. Waugh

From Year Book 1925

(The British Journal of Surgery) has published a report of one hundred and eighty operations on a mobile cæcum that is very convincing. During the early fetal life, the cæcum and ascending colon is up under the right costal arch. The descent to the right lower quadrant may be influenced or retarded by the mesentery and if the cæcum does not descend to its normal position on time, other organs may occupy the place the cæcum should normally have, thus explaining a

misplaced cæcum or appendix. In looking for an appendix or even the cæcum we must bear in mind that they may still remain up under the liver. In this case, the appendix is generally retro-cæcal. This will also explain why the ileum does not enter the cæcum in the normal way. The ileum may enter the cæcum from the posterior portion instead of the side.

The bands that form a Lane's "kink" or a Jackson's membrane are derived from the right mar-

From Year Book 1925

gin of the omentum according to different authorities as well as our own observation. Just recently we operated a case for gall-stones but in taking out the appendix first, which we do as a routine, if the appendix is diseased, we found a tongue shaped portion of the omentum grown across the cæcum to the posterior parietal peritoneum. Now this was a Jackson's membrane where the omentum fused distinctly with the parietal peritoneum. A Jackson's membrane can often be traced to the omentum. The Jackson's membrane and Lane's "kink" shortens the mesentery while a mobile cæcum has too long a mesentery. In my experience, the obstructive form is much more common, but probably I have not been looking for the mobile form closely enough. In the obstructive form, the bands should be cut, in the mobile form, the ascending colon should be sutured to the posterior parietal peritoneum, according to Waugh. In the history of the above mentioned cases, the symptoms are not quite typical for the things they assimulate which should make us suspicious.

According to Waugh, in operating for a mobile cæcum, he delivers the cæcum on to the abdominal wall through a long right rectus incision and then cuts the posterior parietal peritoneum and the fascia just beyond where the vessels of the mesentery run to the ascending colon. Turn this back for an area the size of the ascending colon and then suture the free margin of the peritoneum and fascia to the anterior surface of the ascending colon. This will immobilize the colon and according to his and other reports will cure these symptoms.

Pregnancy benefits these cases, showing what support will do for a mobile cæcum. It is an easy matter to see how it would be hard for the peristalsis to move a semi-solid mass up hill through a mobile or obstructed ascending colon.

Bands, which I feel should never be called adhesions, may be found at the hepatic or splenic flexure of the colon and on the sigmoid. Recently we treated a patient, female, thirty-five years old, who showed symptoms of a pelvic abscess on the left side. She had fever, leucocytosis 22,000, vomiting and was very tender over the left pelvic region. The clinical diagnosis was a left pelvic abscess. She improved under rest in bed and was operated two or three weeks later. At operation, nothing was found wrong except a broad band across the sigmoid. When the band was severed the patient was relieved.

Harbin says that 80 per cent of the acute abdomens are due to the appendix and that 60 per cent of deaths from this condition are due directly or indirectly to the appendix. The year book for surgery this year observes that the death rate from appendicitis is increasing and it claims that we need some man like J. B. Murphy to waken us up to greater efforts. C. H. Mayo agrees that the death rate is increasing but he says it is because we have quit discussing appendicitis in our meetings. I agree with the latter view. John B. Deaver says that when a patient complains of a pain in the abdomen the first organ to think of is the appendix.

When shall we operate on an acute appendix? As soon as the diagnosis is made. The principle of Ochsner's "wait and starvation" treatment after the first thirty-six hours has led to a lot of misunderstanding and confusion. The following case will illustrate my contention. A young man, twenty-five years old, had been ill for three days with appendicitis. He had seen no physician. Examination showed a board-like rigidity in the right lower quadrant. He had been vomiting for

the last twenty-four hours. With a history of former attacks, pain in the right side for three days, muscular rigidity, fever and a high leucocyte count, I did not hesitate to make a diagnosis of a suppurative appendicitis with localized peritonitis. Under local anesthetic with a little gas we found a gangrenous appendix with some exudate, but no perforation. He made a quick recovery. To have waited in this case would have been a serious mistake and no one can tell what an inflamed appendix is doing or will do. Unless it be a case that is distinctly improving or one that is moribund, operate at once. It is a mistake to operate upon patients that are too far gone and yet every patient should receive what help there is to be had from surgery when there is any chance left. It would take too long to discuss appendicitis in general but I would like to say a few words about suppurative cases. If I should ever get a suppurative appendicitis I hope I can get some surgeon to operate upon me, through a muscle splitting incision. You say, well, you cannot explore through such a short incision. That is the very reason why I want that incision, so there can be no exploring. With a perforated appendix, we are not operating to remove the appendix but to save the patient's life. If you are operating on me do not stop to take the appendix out if it is going to add to the risk. Later, after two or three months, it is easy to take out an appendix that has been drained. Drain the abscess and get out. If the abscess gravitates to the cul-de-sac in women or around the rectum in men or women, then it is a minor operation to open from below. One thing we have to be careful about, the abscess must bulge into the vagina or into the rectum before we attempt it. Some of the most humiliating experiences of my life have been trying to open an abscess from the vagina or rectum when there was no abscess or when it was too high.

It is impossible for me to diagnose chronic appendicitis. Patients that we see in the office complaining of pain in the region of the appendix without any history of recurrent attacks, with no fever and no increase of leucocytes are usually cases of Jackson's membrane, a Lane's "kink" or a mobile cæcum. The appendix may be involved in the membrane or it may not. In this kind of a case, in women, it is our custom now to make a median incision. Everything in the region of the appendix can be corrected through this incision as well as the pelvic work. Since we have adopted this plan in women we have found more things to correct in the pelvis than we formerly did, consequently we are geting better results.

Infection following confinements or abortions cause more deaths, in our experience, than all other gynecological conditions put together.

Nothing is so pathetic as to see a mother die after confinement. In these cases the prognosis usually depends on the kind of a germ. If there is nothing localized and the infection takes the form of a true septicemia we have found nothing that will influence the course of the disease. Young has described the wonderful results he gets from mercurochrome, but we tried it with no beneficial results at all.

If we are fortunate enough to have a pus forming germ, then surgery has a chance to save most of the cases. I lost a case of this kind this year due to a surgical error. This was a colored woman about twenty-five years old. She had been confined by a midwife eleven weeks before she entered the hospital. After her confinement, she had not been able to be out of bed. When we first examined her she had a temperature from normal up to 100½ degrees with a leucocytosis about 15,000. She had noticed a mass in the right side, about opposite the umbilicus, as large as a cocoanut. Bimanual examination showed nothing in the vagina. We kept her under observation for a few days but there was no improvement. We opened the abscess under gas which was mistake No. 1. It should have been done under local. When we cut down on the abscess the mass was so hard that I could not believe it was an abscess, so I dissected around it a little, making an opening into the free peritoneal cavity, mistake No. 2. Then the pus came out with a gush, spreading some into the general peritoneal cavity. That night the temperature rose to 105. Next day she began coughing and developed a septic lobar pneumonia on the left side. She died five days after the operation. At postmortem she had a general peritonitis and a left lobar pneumonia. I gave myself credit for her death.

A fibroid uterus is usually so easily diagnosed and so easily removed that I think a word of warning as to prognosis and operative risk might be in order. There is a toxin secreted from a fibroid in the uterus which affect the heart muscles. A careful examination of the heart with this point in mind should be carried out in every case of a fibroid. If the heart muscles are involved the patient will usually be short of breath going up one flight of stairs. In these cases the appendix should not be removed as a routine, for it gives an added risk.

The next case is one that came to me complaining of the worst menstrual pain of which I had ever heard. She had borne three children and she claimed the pains at each period were worse than

the pains of child-birth. On bimanual examination, there was a tumor mass to the right side of the uterus about as large as a goose egg which we mistook for an ovarian tumor. This patient was unwell about one-fourth of the time, most of which had to be spent in bed. At operation, we found the ovaries normal in size. The left tube was normal. The mass we felt was the right horn of the uterus which bent on itself and extended down toward the vagina. The tumor, which was a unicornate uterus, was about the same length as the uterus itself and about half as large as the uterus. We amputated this horn at the body of the uterus. There was no other pathology. Since the operation she has flowed three or four days a month with no pain at all.

The next case I want to describe I think is of unusual importance and often overlooked. This woman gave a history of having been confined the first and only time at thirty-seven years of age, which was three years before I saw her. She had a hard instrumental delivery. Evidently there had been no severe post-partum infection for she was up and about in ten days. She came to me with this history, "Doctor, I have never been well since my baby was born". We have all had patients with this history. She complained of a soreness in the lower abdomen especially over the left tube. She was unwell six or seven days each month, followed by a small amount of vaginal discharge. Before her confinement she had never been bothered with any leucorrhoea. Up to the time of her confinement she had always been well. Bimanual examination showed a lacerated cervix, the uterus a little enlarged in size and normal in position. Both ovaries could be palpated and were normal in size. (Most normal ovaries can be palpated but not the tubes.) There was nothing definite to be felt over either tube, only tender on pressure. Preoperative diagnosis was lacerated cervix and explore tubes and uterus. At operation, we repaired the cervix and then opened the abdomen to find the uterus and tubes showing evidence of a chronic infection. Both tubes were somewhat enlarged and red. The uterus was enlarged and showed evidence of a chronic endometritis and metritis. From the history and the appearance of the tubes and uterus (the patient was forty years old) we did a sub-total hysterectomy, removing both tubes. Microscopic examination of the uterus showed a metritis and an endometritis throughout. Since the operation the patient has had complete relief, feeling as well as she ever did.

The American College of Surgeons is insisting on patients, who are going to have a serious operation, be in the hospital one or two days before operation, and they are correct. On our service at the City Hospital we get the patient thoroughly hospitalized before they are operated upon. As soon as the patients are assigned to our service they get medicine of some sort, usually bromides, until they are sleeping better and feel at home. Three or four days rest in bed makes the prognosis much better and shortens the convalescence. Judd says, fat people stand operations as well as other people, but that has not been our experience. If a patient is very fat and has a condition that we can afford to wait with, we put them on an anti-fat diet, having them lose about one pound a week until there is no shortness of breath on going up one flight of stairs. Then I consider them a good risk. Patients that are poor risks usually take an anesthetic poorly and the reason is that, when they are fighting the anesthetic, they are almost dead. I feel I can tell the prognosis by the way a patient takes the anesthetic. One that struggles and fights the anesthetic, making it hard to operate, is frequently a poor surgical risk and sometimes a bad prognosis or even a fatality can be predicted from the way they take the anesthetic.

There is one absolute contraindication to operation that I think has not been sufficiently emphasized and that is this—if I say to a patient "You must be operated upon in order to get well" and he or she says, "Well, if I am operated upon I will die"—that settles it with me. I have never seen a case, that said that, but what died if they were operated upon.

Post-Operative Treatment

First—Give morphine to relieve pain and discomfort. There are a few surgeons who are afraid to give morphine for fear it will depress the heart or dry up secretions. Morphine does neither. It is a heart stimulant as it causes the heart to beat slower and it is also a diuretic.

Second—Do not wait for the patient to vomit to wash out the stomach. No patient is too young, too old or too sick to have their stomach washed out.

Third—Instead of giving proctoclysis, give normal saline 1000 c.c. with one ounce of a 1 per cent solution of novocaine as a hypodermoclysis. Do not give it under the breasts but in the loose areolar tissue along the side of the chest. One can give as high as 4000 c.c. a day. We usually give 2000 c.c. a day. The nurses give this. Proctoclysis is contraindicated when the patient is vomiting for it is often the cause of the vomiting. I found this out by accident. A post-operative appendix of mine was doing poorly. On the third

day I did an enterostomy. Four days afterwards he died. At post-mortem I found the enterostomy had worked fine for five or six feet below the enterostomy but not for six inches above. Since that we have given no proctoclysis when the patient is vomiting. And this explains why a high enterostomy will often save a patient when a low one will not. I do not hesitate to predict that proctoclysis will be discontinued in the future because it causes the patient to vomit more.

Fourth—Probably the greatest thing that has been introduced in surgery since insulin was discovered was the intravenous injection of a 10 per cent solution of glucose followed by insulin. I predict that insulin will do more good for the human race in this connection than it will in the treatment of diabetes.

OPHTHALMOLOGY AND THE GENERAL PRACTITIONER*

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In this paper I am not going to stress any one subject in particular, but rather to attempt to strengthen the position and work of the physician in general practice, in the field of ophthalmology. Much eye work is neglected by general men, either from lack of interest, in this field, or from a lack of knowledge of its more fundamental phases.

One very important phase is that of prescribing for and fitting to the eyes, proper glasses. It is an impossibility to even estimate the discomfort and the loss of productive efficiency resulting from errors of refraction. If I were the employer of any considerable number of employes, every one would periodically be subjected to physical check-up, and particularly that of vision, for two reasons. First, self-protection to the employe, and secondly, his part played in production to the benefit of society in general.

In our industrial work, the large majority of the cases injured, can be traced to carelessness on the part of the employe; the loss resulting is tremendous. We have the value of these facts demonstrated repeatedly, but so long as the insurance company will carry the risk and pay the losses, the employer is satisfied with the present conditions. But this does not restore the lost eyesight.

Today, too much of this work is done by laymen, the local jeweler or the traveling optician, whose knowledge of the eye, its functions and its physiology, to say the least, is indeed very limited.

Within the month I have seen a man, age fifty-six, with a vision of 6/6 or 20/20 in each eye, who was fitted by an optician to a - 2.00 S. two and one-half years ago. As a result of wearing such a lens he had a tension of 38 m.m. in one and 40 m.m. in the other. He needed no correction for distance, and with the removal of the glasses, the tension is now 25 m.m. in one eye and 26 m.m. in the other, a safe tension. This is only one of the many thousand cases.

My contention is that this refraction work should be done by the local physician. It is not so difficult as many think, and the expense of the necessary equipment is comparatively small. The methods of refraction are largely standardized and it requires only a short time to master one of these methods, so that one can satisfactorily fit the larger number of one's cases and be in a better position to appreciate the more complicated ones, and refer them when necessary. One can very easily tell by the use of the pinhole disc as to whether one is dealing with an organic lesion or a refractive one and often save your patient a considerable trip and financial outlay.

One can get this work in most any of the larger cities. Your own state university gives an excellent course. A good course is also given at Cedar Rapids. Incidentally, you will get a lot of pleasure out of this work and be well rewarded financially, both directly and indirectly.

Please do not overlook the benefit to be gained by the use of colored lenses, especially Crooks and Cruxite, for some of these cases.

Just because an eye is not closed by swelling, or severe pain present, it is allowed to go untreated, and too often at the suggestion of the physician. It is surprising the relief obtained by the fitting of a proper glass and the use of a solution of neosilvol, 10 per cent or solution mercurochrome, 1 per cent, or argyrol, 10 per cent, combined at bed time with a little 1 per cent ung. hydrargyrum flavum rubbed into the lid margins. Keep these cases under observation occasionally until they are completely relieved.

My experience has been that the physician too often tarries too long before taking advantage of consultation in the more severe cases, apparently forgetting for the time being, that vision is very vital. In these severe cases destruction is extremely rapid and irreparable, so I beg of you to confer with your ophthalmologist early. I refer largely to the traumatics, ulcers, iritis and glaucomas. It is true that the difficult cases sooner or later get into the hands of the ophthalmologist, but often too late for beneficial treat-

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ment. The glaucoma case whose central vision is the last to go, and when seen in this stage the pressure of the eyeball has caused marked atrophy of the nerve-head, which is permanent and with its resulting loss of vision. Likewise, with the tumor cases, both intra and extra-cranial, and intra and extra-ocular. These tumor cases are not so rare, but the large majority go undiagnosed until destruction is so far advanced that even with operation the vision is not improved, and life itself is jeopardized.

The intraocular condition is another chapter. Every man in the practice of medicine should develop at least some ability in the use of the ophthalmoscope. While ophthalmology has been a more or less fixed science, yet in recent years a remarkable development has taken place in the interpretation of the findings in the fundus of the human eye, in its relations to general systemic pathology. One could cite many cases illustrating each of the conditions referred to.

My mesasge to you is to get busy with your ophthalmoscope. Put your patients in a darkened room, and if the pupil does not dilate sufficiently for a careful examination, use a little 4 per cent solution cocaine, or 1 per cent holocaine, or one-half per cent homatropine, and study these fundii. It is the ideal field to note vascular changes. Its study will give you a very close estimate of the physical age; it permits you to visualize the cardiovascular changes. It will tell you what the kidney is doing, and is a positive prognosticator in nephritis. It will classify properly your diabetics, and solve many of your neurological problems. You will then be in a position to recognize nerve-head changes, detachment of the retina and many other conditions, and by so doing you will have done your full duty by your patient. Only recently I saw a young woman, twenty-six years of age, referred to me for an eye check-up. She had had gastric disturbances and had been examined by two competent gastroenterologists, with a negative report, including the ordinary blood Wassermann. I found a left dilated pupil which suggested spinal puncture, resulting in a decidedly positive reaction. Abdominal exploratory surgery had been previously suggested, but the pains are disappearing under the proper anti-treatment.

In closing, I wish to call your attention to a treatment to check the senile or arterosclerotic changes in the crystalline lens, resulting in the so-called cataract. This treatment should be instituted before the cataract is 60 per cent to 70 per cent mature. It consists of dionin in glycerine, dropped into the eye daily. It is harmless, inexpensive, and easily used. I have had six cases, which I admit is a small number, under treatment. The results have been very, very gratifying indeed. The cloudiness in the lens lessens, with a resulting improvement in vision, which improvement has continued. The longest case was eighteen months under treatment, and has shown improvement of nearly 50 per cent.

UREA AS A THERAPEUTIC AGENT, ESPECIALLY POST-OPERATIVE*

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Urea is an end product of protein digestion in the human body and its formation is influenced by the dietary protein intake, the water intake, the toxemic conditions and nervous or physical agents affecting the metabolism of the foods.

The amount of urea present in the blood stream at any one time varies with the above influences, and also increases as the permeability or working power of the kidney decreases.

The following brief review of a few cases illustrates the above contentions:

Case 1. An adult male was admitted to the hospital with a skin disease that was supposedly amendable to treatment with a low protein diet, therefore he was placed on a sixty gram protein intake daily and shortly began to develop an edematous condition. This started on the right foot and extended upward, later on the left foot, with similar extension, until level of the edema reached the spinous process of the eighth dorsal vertebra. His blood urea at this time was low, namely 8.4 milligrams per 100 c.c. of blood. All medication was intentionally omitted and he was placed on a daily intake of one hundred and twenty grams of protein. This resulted in a total disappearance of his edema within the following ten days. In this case an increased protein consumption raised the available supply of urea.

Case 2. An adult male with dyspnoea and orthopnoea, enlarged heart with cardiac insufficiency, and a marked edema (terminal state). Scrotum was the size of a cocoanut from the edematous condition. This case was demonstrated on Wednesday afternoon, placed on urea 15 grams three times daily by mouth, and later shown on the following Saturday morning to be free from edema.

Case 3. Carcinomatosis. A male adult forty-eight years of age with marked edema and ascites, which condition was becoming progressively worse; patient experienced much difficulty in breathing and stated that the most of the water he consumed lodged in the tissues and the abdominal cavity. His daily intake of fluids and his output of fluids were

*From Laboratory of Jane Lamb Memorial Hospital, Clinton, Iowa.

charted and showed a rather marked retention of fluids. He was then placed upon urea therapy by mouth and the diuresis was very prompt, although his blood urea was 49.7 milligrams per 100 c.c. before any urea was given. The output of fluids exceeded intake for two days at which time the patient insisted upon withdrawal of all the ascitic fluid possible; following this procedure he died.

In other instances with edema present both in young and old patients, the administration of urea was followed by relief from the edema.

The results obtained in many cases leads one to conclude that urea is the diuretic of choice in that it is a physiological component of the blood stream. On the same basis, the theory is advanced that urea is not a retention product *per se*, but an increased blood urea signifies damaged kidneys. The more the pathological change the higher the blood urea and thus it is an indicator of the extent or amount of the pathology in the kidneys.

Urea has been used therapeutically in association with my hospital work both at the State University of Iowa Hospital of Iowa City, and the Jane Lamb Memorial Hospital of Clinton, Iowa, for the past five years, and has been given both per os and per rectum in dosages varying from two to fifteen grams three times daily; however, with the larger doses the fluid intake should not be limited in any way. The results of urea medication have been very satisfactory and it is very useful, especially in post-operative conditions. For example, take any patient, following a general anesthesia and operation, emesis generally takes place, and this emesis, in conjunction with the pre-operative preparation of the bowels, leaves the intestinal tract pretty well emptied, and diet is withheld for a time after operation. There is under these conditions a very small supply of protein available for urea formation. Again, urea is supposedly formed, partially at least, in the liver; following an anesthetic, especially a prolonged one, pathological changes take place in the liver and this in turn cuts down the amount of urea formed. At this time, that is immediately post-operative, it therefore appears highly advisable to administer urea either by mouth or in the salines per rectum and thus avoid a threatened kidney block by furnishing this diuretic to the urea depleted patient at a time it is most needed.

At this point, it might be well to bear in mind that oftentimes a post-operative case seems to be making an exodus, and the cause of the same remains obscure.

A careful urine examination will now as a rule show a concentrated urine as indicated by the specific gravity and a renal disturbance as indicated by the albumin, cylindroids and casts found to be present. The prompt use of urea will change the entire laboratory picture, the effects beginning to be evident after the initial dose of urea. Patients showing fields of casts in non-centrifuged urine specimens, will clear oftentimes within twenty-four hours, and it will be hard to demonstrate casts again on these patients providing of course there was no evident kidney lesion pre-operative. The diuresis is prompt, well marked and the clinical improvement in the patient's condition is very satisfactory after urea therapy in such cases.

CONCLUSIONS

1. Urea is a natural diuretic and the height of the blood urea is indicative of the extra amount of systemic effort required to make the kidneys functionate.
2. Urea is not a retention product per se.
3. Urea is valuable as a therapeutic agent to prevent and relieve post-operative kidney block and its use in such cases should be routine.

MEMBERS

Unless your 1926 dues have been transmitted to the office of the State Secretary you are NOW under suspension.

By-Laws—Chapter I, Section 5—

For the purpose of medical defense a member shall be regarded as in good standing only when his dues have been received by the Secretary of the State Society: nor shall any member under suspension or expulsion be eligible to the benefits of the medico-legal fund for any alleged wrongful act while under suspension or expulsion.

COUNTY SECRETARIES

The By-Laws of the State Society provide that:

Chapter IX, Section 2—

Any county society which fails to pay its assessment, or make the reports required, on or before February 1st, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society, or of the House of Delegates, until such requirements have been met.

If you have not complied with Chapter IX, Section 2, your County Society is NOW under suspension.

The Journal of the Iowa State Medical Society

David S. Fairchild, Editor ..... Clinton, Iowa

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SUBSCRIPTION $3.00 PER YEAR

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Office of Publication, Des Moines, Iowa

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THE HAZARD OF THE PRACTICE OF MEDICINE

We have heard much of the advantages that have come to humanity from the advancement in the science of medicine. It has been said in our hearing that the average length of human life has increased something like twenty years. That the saving of children's life has been enormous. That plagues have practically disappeared and that dangerous epidemics are mostly under control. Most people are willing to admit that this change has been brought about through the advancement of medical knowledge. There are some people no doubt who still hold to Divine interposition in controlling disease. We are willing to admit any degree of Divine influence in leading men to make great discoveries into the causes of disease if it will be granted that Divinity leans on human aid. There was a long period before the days of Jenner and Pasteur when Divine agencies had the entire field and we know what was the result, so we often hear on public occasions when the doctors occupy the stage, of the wonderful things that the medical profession has done to make life more comfortable, all of which we joyfully accept. If this sentiment, expressed on occasions, could be carried out into the everyday work of the doctor, there would not be so many physicians die prematurely of heart disease. We are not complaining, but are taking this occasion to refer to the dangers of the doctor from the practice of medicine.

Everyone looks upon self-sacrifice and disregard of personal comfort as one of the most important qualifications of the medical practitioner. We are disposed to regard the extraordinary demands of patients and their families in moments of danger and stress with patience. But the deliberate attempts to do the doctor great harm and injury when the opportunity arises, we condemn most emphatically. We may be permitted to mention a few of the causes of resentment which the doctor may justly entertain. First, suits for malpractice. We have in the past eighteen years investigated some 400 cases, with claims amounting to three million dollars. A few of these cases may perhaps be justified, but the great majority are wrong and unjust, based on the idea of getting some of the doctor's hard earned money, or, at least, to do him great harm. These are sore trials and cause the doctor great mental anxiety and worry, and hardness of heart, when he feels that he did the best that could be done under the circumstances, and often when the cause of complaint was the direct result of the patient's or his friends' failure to cooperate.

Second, which we desire to especially note. These are the result of unwise legislation, which have placed a great burden upon the upright and conscientious physician, and a profit and indifference to the designing ones. The real doctor only prescribes alcoholics when he feels conscientiously that his patient needs them. The other doctor prescribes alcoholics when the applicant wants them and will pay liberally for the prescription. If one gets into trouble, it is the well meaning doctor.

The anti-narcotic law is even a greater burden of trouble and danger. The law was never intended to interfere with the legitimate practice of medicine, and if an occasional sacrifice was necessary to reach the class of people the law was intended to reach, the sacrifice might be accepted, but it does not, because the consumption of narcotics was never so great as now, even considering the increase in population. We often read of conscientious and upright physicians being led, by illegal methods, by designing law enforcement agents, into prescribing narcotics. Even within the year one conscientious physician was led to commit suicide from the humiliation of a conviction for law violation. This method of law enforcement was never intended, and has been severely condemned by the federal courts. The law was passed as a revenue measure and for such incidental moral effect as might come under a primary revenue measure. The working of this law is plain and simple. It is intended to permit a doctor to prescribe narcotics for a bona fide

patient in whose case the doctor believes the patient needs morphine or other narcotics. This is prescribing morphine for a genuine patient under the doctor's care and in good faith. The doctor should have in mind that there are "hold-up men" on the road who go from one doctor's office to another and ask for morphine for an alleged suffering from pain, and induce the doctor to give him a hyperdermic or tablets, and then holds up the doctor for a sum of money on pain of prosecution. In such cases when the doctor feels that he has fallen into a trap and has been held up, do as he would do in another hold-up, cause the man's arrest for fraud, even if he is a law enforcement agent. These men are going over the country as hold-ups. These scandalous proceedings have been exposed in the whiskey enforcement. The courts have held that such measures of detection are warranted when the doctor has become more or less notorious as a purveyor of narcotics. If, therefore, the doctor has made a proper diagnosis and has fairly come to believe that morphine is the proper remedy, he has nothing to fear, but if he has accepted the statement of the alleged patient and prescribed and given morphine, or if he has prescribed morphine in good faith and finds he has been held up, he should report the case to the police as he would another hold-up. If he has fallen into the habit of giving morphine for the fee and has fallen under suspicion, he cannot complain if the department adopts the method ordinarily employed in detecting criminals, for if he violates the law willfully, he is a criminal.

In these days it is not safe to be a "good fellow" and adopt a generous spirit. So if a man comes to the doctor's office, whom the doctor does not know, and does not submit to a regular examination and treatment, and the doctor does not think he is acting in good faith, send him away.

MEDICAL STUDY TOUR TO EUROPE

The Travel Study Club of American Physicians, which was founded at the International Medical Congress at London, in 1913, is arranging a 1926 study tour to Oslo (Christiania), Stockholm, Copenhagen, Hamberg (optional to Berlin and Munich), Cologne, Wiesbaden, Heidelberg, Strasbourg, Berne, Zurich, Leysin, Geneva, Paris and London. Dr. Louis L. Seaman of New York is president; Dr. Fred H. Albee of New York, Dr. Edward B. Heckel of Pittsburgh, Dr. John P. Lord of Omaha, vice-presidents. Physicians of good standing are welcome to participate in this study tour to the limit of fifty, and for information should address the secretary, Dr. Richard Kovacs, 223 East Sixty-eighth street, New York City.

TEXAS STATE SOCIETY BUDGET

It is not without interest to note the financial condition of our associated state medical societies. We are referring for the moment to the Texas State Medical Society's budget for 1925-1926. The society has 3000 members and the dues are $10.

Income		
Dues from 3,000 members—		
Subscription to Journal	$ 6,000.00	
Medical defense	3,000.00	
Association fund dues	36,000.00	
Journal advertising	14,000.00	
Interest on funds	3,500.00	
Total Income		$62,500.00
Budget Appropriations:		
Medical defense, attorney fees	$ 3,400.00	
Office salaries	480.00	
Rent	120.00	$ 4,000.00
Journal:		
Cost of printing and distributing	$16,000.00	
Administration expenses	2,000.00	
Editor's salary	4,173.33	
Stenographers and bookkeeper	2,339.67	
Miscellaneous	487.00	$25,000.00
Association:		
Annual meeting	$ 1,500.00	
Office expenses	1,500.00	
Secretary's salary	2,086.67	
Salary Dr. Venable	3,600.00	
Salary Mr. Reese	2,400.00	
Stenographer and bookkeeper	1,920.33	
Officers' traveling expenses	993.00	$14,000.00
Publicity and education	$ 1,500.00	
Law enforcement	1,500.00	
Legal and legislative expenses	500.00	
Collection and preservation of records	500.00	
Library	500.00	$ 4,500.00
Total Appropriations		$47,500.00

COUNTY SECRETARIES CONFERENCE

Dr. Frederick C. Warnshuis, the very able and efficient secretary-editor of the Michigan State Medical Society, called a conference of county secretaries at Grand Rapids, April 22, 1925, for the discussion and consideration of questions relating to the work of state and county medical societies "which lasted from 10 a. m. to 5 p. m."

The business of the conference was published in the June number of the Michigan State Journal and occupies twenty-eight pages of the Journal.

A conference of this kind has much to recommend it. The reference we have made of the expenditures of the Texas State Society and the notice of the Michigan conference will be a suggestion to the Iowa State Medical Society.

CONGRESS ON INTERNAL MEDICINE

The Tenth Annual Congress on Internal Medicine will be held at Detroit and Ann Arbor, week of February 22-27, 1926.

The Congress is devoted to amphitheatre, bedside and clinical laboratory demonstrations as well as to symposia dealing with modern phases of internal medicine. Distinguished guests from abroad, Canada and the leading clinics of the United States will occupy prominent places on the program. Four days will be devoted to the work at Detroit and on one day, the society will be the guest of the University of Michigan at the newly opened eleven hundred bed University Hospital.

All physicians, who are interested in internal medicine and who are members in good standing of their local and national societies are cordially invited to attend the Congress.

Hotel headquarters will be at the Book-Cadillac in Detroit. Information regarding reduced railroad rates, program, hotel accommodations, etc., may be secured from the secretary-general.

C. G. Jennings, M.D., president, American Congress on Internal Medicine, Detroit, Michigan.

Frank Smithies, M.D., secretary-general, 920 N. Michigan Avenue, Chicago, Illinois.

PHYSICIAN NOT RESPONSIBLE FOR BURNING OF PATIENT

The supreme court of Minnesota says that the defendant physician attended the plaintiff in childbirth at her home. The child was safely delivered and he left. Three hours later, the plaintiff, who was being cared for by her mother, her husband and by a licensed midwife of twelve years' experience as a midwife, went into convulsions and the defendant was again called. On seeing her condition he said, "Get all the hot water bottles and hot flat irons you possibly can and put on her at once. Get her warmed up". The husband procured four flat irons, which the midwife heated, wrapped up and placed about the patient's person. The plaintiff was unconscious. The defendant, after administering a hypodermic and giving her some further treatment called an ambulance and directed that she be taken to the hospital, where they arrived at about 11 p. m. Some hours later, the patient regained consciousness. The next morning it was found that she had been badly burned on the right breast and left leg. The evidence would permit a jury to find that two of the flat irons had become unwrapped and caused the burning. The question presented in this action for malpractice was whether the defendant was chargeable with negligence for failing to guard against the happening of such an accident. It was conceded that he, although present, took no part in preparing, wrapping or placing the hot irons. His negligence, if any, consisted in the fact that he gave no attention to them after they were wrapped and placed about his patient by the midwife; that he did not look to see whether any of them had become unwrapped or were likely to cause burns. Wrapping the irons so that they would not burn and so the wrappings would remain in place required no professional skill. The midwife or any person of common intelligence and experience was competent to do it. The court thinks that it could not be said that the defendant was guilty of negligence in trusting the midwife to perform that service and in relying on her to perform it properly. As the fact that he made no examination to see whether the irons were, and remained, properly wrapped, was the only respect in which it was claimed that he was derelict, the court reached the correct conclusion when it, at the close of the plaintiff's case, dismissed the action on the ground that the evidence failed to show negligence in the part of the defendant; and therefore that court's order denying the plaintiff's motion for a new trial, is affirmed.

ANNUAL MEDICAL CLINIC

The annual Medical Clinic of the College of Medicine of the State University will be held at the University Hospital, Iowa City, Tuesday, April 13 and Wednesday, April 14, 1926.

This Clinic has come to be an annual event and is attended by a large number of physicians of the state.

Dr. Campbell H. Howard, professor of McGill University, Montreal, Quebec, Canada, formerly professor of theory and practice, State University of Iowa, will conduct a diagnostic clinic. Many of Dr. Howard's friends and former students will welcome this visit.

Dr. McKim Marriott, professor of pediatrics, Washington University, St. Louis, Missouri, will hold a clinic on diseases of children.

The meeting will be entirely clinical, other features are being added which will stimulate interest and will be announced later.

THE PLIGHT OF RUSSIA

In an address before doctors and newspaper men delivered in Berlin about a month ago Dr. Semaskho, Soviet commissioner of health, stated that there are only 33,000 physicians to serve 140,000,000 Russians. Since the doctors in the Soviet states are public employes and no money is available for salaries for physicians, there is no inducement for other physicians to migrate to Russia. Although private physicians are not barred from practicing, very few have much to do.

ENSWORTH MEDICAL COLLEGE ALUMNI

The Alumni Association of the Ensworth Medical College was formed in Kansas City in October, with a membership of forty-three. Dr. Charles Geiger of St. Joseph was elected president of the association. The writer is very anxious to have enrolled all the graduates of Northwestern, Central and Ensworth Medical Colleges. The dues are $1 per year. We hope to have 100 in attendance at the meeting next fall. All graduates of the three colleges mentioned above are urged to send in their names to the secretary for enrollment at once. Charles Wood Fassett, M.D., secretary, 115 East Thirty-first street, Kansas City, Missouri.

SOCIETY PROCEEDINGS

Boone County Medical Society

Officers for the coming year were elected at the meeting of the Boone County Medical Society which was held recently in the office of Dr. L. A. Bassett. Two interesting papers were read before the meeting by Dr. C. A. Noland and Dr. A. B. Deering. The former was illustrated by slides, the machine being operated by Dr. Bassett.

The officers for 1926 follow: President, Dr. L. A. Bassett; vice-president, Dr. G. H. Stanger; secretary-treasurer, Dr. M. C. Jones; censor (for three years), Dr. M. A. Healy. Delegate to state convention, Dr. N. M. Whitehill, alternate, Dr. J. O. Ganoe, Ogden.

Bremer County Medical Society

The Bremer County Medical Society held its annual banquet and election of officers Tuesday night, December 15 at Waverly. The banquet was served by the Sisters at St. Joseph's Mercy Hospital, in the auditorium of the nurses' home. Twenty-five were present. The menu included turkey with all the trimmings. Following the dinner, election of officers was held. Dr. Clasen of Tripoli was elected president; Dr. Epeneter, Denver, vice-president, and Dr. Gernsey, Waverly, secretary-treasurer. Dr. Epeneter was also elected censor for the coming three years, Dr. L. C. Kern was selected as delegate and Dr. F. R. Sparks alternate to the meeting of the State Medical Society.

Calhoun County Medical Society

The Calhoun County Medical Society has just ended a year's special effort toward education of the city to think more often and intelligently of health matters. A subscription to the A. M. A. health journal "Hygiea" was contributed to every high school and public library in the county; a special advertisement noting the readiness of the society's members to make periodic health examinations as recommended by the National Health Council, was printed, and a column of "Health Notes" was furnished weekly to each county newspaper. Physicians have requested people coming to them for examination to mention the fact that the above activities led them to come.

At the December meeting it was voted to continue the health notes but to substitute for the weekly advertisement of periodic health examinations, a business appeal to be published quarterly.

The members partook of dinner at the Brower Hotel, tendered by the Rockwell City physicians.

The following officers were chosen for the ensuing year: J. W. Craig, president; Eleanor Hutchinson, vice-president; P. W. Van Metre, secretary and treasurer (re-elected); D. J. Townsend, delegate and A. C. Norton, alternate.

P. W. Van Metre, Sec'y.

Carroll County Medical Society

The Carroll County Medical Society met December 4, 1925, at St. Anthony's Hospital. Following dinner a paper was read by Dr. H. W. Scott of Fort Dodge on Upper Urinary Tract Calculi. Following the paper the policies of the society for the coming year were discussed. The elected officers are as follows: President, Dr. W. W. Shirley; vice-president, Dr. L. W. Chain; secretary-treasurer, Dr. W. L. McConkie; delegate, Dr. C. E. Wolfe; alternate, Dr. H. R. Pascoe.

W. L. McConkie, Sec'y.

Cass County Medical Society

The Cass County Medical Society held a special meeting for the election of officers and payment of dues, at the Masonic Temple, Atlantic, Wednesday afternoon, December 9.

The following officers were elected for 1926: President, Dr. R. B. Chisholm, Griswold; vice-president, Dr. R. A. Becker, Atlantic; secretary-treasurer, Dr. M. F. Stults, Wiota. Dr. R. A. Becker, Atlantic, was elected as delegate to the Iowa State Medical Society and Dr. C. G. Clark, alternate.

There was some discussion as to the best method of collecting assessments for the banquets given in October, each year. At our October general meeting, held in Atlantic this year, a motion by Dr. Greenleaf, Atlantic, was unanimously passed, raising the annual dues to $8.50 per year, $2 of which was to form a fund for financing the annual banquets. The doctors present when the resolution passed were from the north part of the county and Adair. At the late meeting Griswold, Cumberland and Massena lined up solidly against the assessment, besides two or three other doctors from the north part. But the doctors present at the special meeting Wednesday, December 9, became convinced that the assessment was not a wise thing and repealed it. But good came out of the discussion, for a motion was made at the suggestion of Dr. R. A. Becker of Atlantic, president of the society, that each doctor be required to send in his check, with his reservation. This will relieve the officers of the society from possible embarrassment when settling for the banquet.

Dr. Becker made an unusually good president for 1925.

W. F. Stults, Sec'y.

Cerro Gordo County Medical Society

The Cerro Gordo County Medical Society met in regular session January 19, 1926, at Hotel Hanford, Mason City, Iowa. Forty-three members enjoyed an excellent 6:30 dinner after which the meeting was called to order by the president, Dr. C. E. Dakin.

A general outline and discussion of the yearly program was in order and satisfactorily settled. Among the matters of business attended to, the outstanding feature was the unanimous vote to raise the county society dues to $5. Several committees were appointed.

Dr. W. J. Egloff of Mason City then addressed the society, his subject of Pneumonia, being a current problem, was discussed by several members, from which much that was instructive was forcibly brought out, and the address and discussions were greatly appreciated. E. L. Wurtzler, Sec'y.

Chickasaw County Medical Society

The Chickasaw County Medical Society held a meeting in Nashua Monday evening, December 14. A banquet was served at Fangmeier's Cafe at 7:30, after which the doctors, eight in number, went to the Commercial Club reception room where a round table session was held. Those present were: Drs. Paul Gardner, McGrane and Landon of New Hampton; Kerwich of Lawler; Woodard of Mason City, and the three local doctors, Stuart, Goodale and McDannel.—Nashua Reporter.

Clinton County Medical Society

Programs of the Clinton County Medical Society for 1925.

January 23, 1925—Carcinoma of the Cervis and Uterus in Young Women, H. J. Heusinkveld, Jr., M.D., Clinton.

March 26, 1925—Use of Iodine in Exophthalmic Goiter, Fred M. Smith, M.D., University of Iowa, Iowa City.

April 29, 1925—Metastatic Tumors in Bone, Hugh N. McKechnie, M.D., University of Illinois, Urbana. The Nervous Patient, John I. Marker, M.D., Davenport. The Shepperd-Towner Law in Iowa, Fred Gerkin, M.D., Iowa City.

May 25, 1925—Blood Transfusion, Lester Powell, M.D., Mayo Clinic, Rochester. Some Practical Aids in the Management of Nephritis, P. S. Hench, M.D., Mayo Clinic, Rochester.

June 30, 1925—Acute Pyogenic Infections of the Face, L. P. Engel, M.D., University of Kansas, Manhattan, Classification of Goiter, A. E. Hertzler, M.D., University of Kansas, Manhattan.

August 27, 1925—Syphilitic Lesions of the Ear and Their Treatment, F. W. Broderick, M.D., Sterling, Illinois. The Management of Diabetes, F. H. Lamb, M.D., Davenport. Remarks on Gastro-Duodenal Ulcer, H. E. Pfeiffer, M.D., Cedar Rapids. Diet in Gastroduodenal Ulcer, F. M. Keefe, M.D., Clinton. The Diagnosis and Treatment of Pericarditis with Effusion, E. S. Murphy, M.D., Dixon, Illinois.

November 24, 1925—Management of the Toxemias of Pregnancy, F. H. Falls, M.D., University of Iowa, Iowa City. Surgical Aspects of the Kidney, N. G. Alcock, M.D., University of Iowa, Iowa City.

Emmet County Medical Society

A meeting of the Emmet County Medical Society was held December 8 in Estherville at the office of the president, Dr. M. E. Wilson. All the doctors of Emmet county belong to this association. Those present were Drs. M. E. Wilson, W. E. Bradley, C. E. Birney, M. T. Morton, R. C. Coleman of Estherville, Dr. J. B. Knipe of Armstrong. Dr. Anderson of Swea City was a visitor.

The old officers were re-elected for the year, Dr. Wilson, as president; Dr. West of Armstrong, vice-president, and Dr. Bradley, secretary-treasurer. Dr. Knipe was elected a delegate to the state convention that will be held in Des Moines in May.

Besides the election of officers, discussion of various phases of the medical situation in the county was discussed and important resolutions passed.

Franklin County Medical Society

The Franklin County Medical Society held an interesting meeting and dinner party at Hotel Coonley Tuesday afternoon and evening, December 15. Dr. F. E. E. St. Clair, president of the society, presided and introduced Dr. T. B. Throckmorton of Des Moines, who read a paper on Heart Diseases, and Dr. Fred Moore, also of Des Moines, who gave a talk on The Feeding of Children. Plans were made by the society to hold a similar meeting each quarter during the ensuing year.—Hampton Chronicle.

Harrison County Medical Society

October 15

The Harrison County Medical Association held an interesting meeting October 15 at the public library, in Woodbine. The meeting was called to order by the president, Dr. S. M. Clark. Talks on the following subjects were included in the program: Presentation of Cases and Talk on Colles' Fracture, Dr. S. F. Devore. Chronic Cholecystitis, Dr. McMicken Hanchett, Council Bluffs. Edema, Dr. Walter Cook. Diarrhea in Infants, Dr. Jack Treynor. Public Health, Dr. E. J. Cole. Sinusitis, Dr. H. N. Anderson.

December 15

The Harrison County Medical Society met December 15 at Logan. An interesting and profitable meeting was held including the following subjects: Exhibition of Medical Books and Talk, Frances van Zandt, State Medical Librarian, Des Moines. Endocrine Disturbances, H. Hansen, M.D., medical officer in charge United States Veteran's Hospital, St. Cloud, Minnesota. The General Practitioner and His Status of Today, Morris Nielsen, M.D., Blair, Nebraska. Community Physician, E. S. Haworth, M.D., Sharon, Kansas. Functional Disorder of the Colon, Gordon N. Best, M.D., Council Bluffs. Thyroid, M. E. O'Keefe, M.D., Council Bluffs.

The following officers were elected for the ensuing year: President, Dr. S. M. Clark, Woodbine; vice-president, Dr. C. A. Heise, Missouri Valley; secretary-treasurer, F. H. Hanson, Magnolia.

One new member was taken into the society, Dr. Julius Moskovitz, Missouri Valley.

F. H. Hanson, Sec'y.

Henry County Medical Society

The Henry County Medical Society held their annual meeting and election of officers with a banquet at the Harlan Hotel, Thursday evening, December 17 at 6 o'clock.

The following named officers were elected for the ensuing year: Dr. E. J. Lessenger, president; Dr. W. A. Sternberg, vice-president; Dr. O. A. Stewart, secretary-treasurer.

After the business of the meeting was transacted, the roads problem was taken up and discussed quite freely, and the following resolution was unanimously adopted:

Resolved, That the Henry County Medical Society endorse the good roads program of the Good Roads Association of Iowa, and

That we support candidates for office, both county and state, regardless of political affiliations, who will vote and support the same.

Iowa County Medical Society

The annual meeting of the Iowa County Medical Society was held recently. Officers elected were: President, Dr. William Moershel, Homestead; vice-president, Dr. L. A. Miller, North English; secretary-treasurer, Dr. Ciney Rich, Williamsburg; delegate to State Medical Society, Dr. C. F. Watts, Williamsburg.

Jasper and Marion County Medical Societies

Members of the Jasper and Marion County Medical Associations, met at Newton November 19 and talked over the problems of their profession. Subsequent tests and discussions of cases demanded a part of the afternoon meeting which took the form of a lecture clinic, which was at the Skiff Hospital. Papers and talks were given by Dr. Evan Evans of Grinnell, Dr. D. J. Glomset of Des Moines, Dr. Frank Ely of Des Moines, Dr. Roberts of Knoxville and Dr. J. W. Billingsley of Newton. A banquet was held at the Country Clubhouse in the evening. About sixty medical men were present for the meeting.

Jackson County Medical Society

The Jackson County Medical Society elected the following officers for 1926 at their annual meeting Friday night, December 11: President, Dr. F. J. Swift, Maquoketa; vice-president, Dr. George C. Ryan, Lost Nation; secretary-treasurer, Dr. D. N. Loose, Maquoketa; censors, Dr. Wm. Lowder, Maquoketa; Dr. C. A. Armstrong, Preston and Dr. F. L. Griffin, Baldwin; delegate to the State Society meeting, Dr. George C. Ryan; alternate, Dr. F. L. Griffin. Dr. Ryan, who was unable to attend the meeting, had prepared a paper on Blood-Pressure and Hypertension and this was read and discussed. A discussion of current topics, pertinent to the medical profession's work, was also enjoyed.

The society voted to buy one $10 health bond as an expression of belief in and appreciation of the spectacular results being accomplished by the state tuberculosis society in its campaign for eradication and prevention of tuberculosis and other preventable diseases through the sale of the Christmas stickers.

—Maquoketa Sentinel.

Lee County Medical Society

Dr. R. L. Feightner of Fort Madison, was elected president of the Lee County Medical Society, at its meeting December 17 in Fort Madison. Dr. F. B. Dorsey, Sr., of Keokuk, vice-president and Dr. William Rankin of Keokuk, secretary-treasurer. Dr. Thomas Bess of Fort Madison, was elected delegate to the State Meeting.

The society voted to invite the tuberculosis association to hold a heart clinic in Keokuk during the year, the date to be set later, at the convenience of the association. Iowa is the second state to take up the heart clinic in conjunction with tuberculosis and this society expressed itself as glad to cooperate with them.

The meeting December 17 at Fort Madison was held in the home of the American Legion. Dr. Alcock could not be present but the rest of the program was carried out. Dr. Cassius Rodgers spoke on brain work, and illustrated his talk with stereoptican slides. This was considered very valuable as many brain injuries result from accidents in present methods of transportation.

Dr. Smith of Iowa City spoke on internal medicine.

The banquet was held at the Presbyterian church. Mrs. Rollin Hopkirk sang two selections and the orchestra from the state prison furnished music during the evening. The Expert Witness was the subject of the after dinner talk by J. M. C. Hamilton of Fort Madison, who was at his best, and whose ideas tuned in with those of the doctors.—Gate City, Keokuk.

Marshall County Medical Society

Marshall County Medical Society met at the Willard Home, December 8 for the election of officers and the transaction of other business.

The following gentlemen were elected: President, Dr. L. J. Wilkinson of Laurel; vice-president, Dr. L. E. Noble of Rhodes; secretary and treasurer, Dr. W. W. Southwick; Dr. A. D. Woods, State Center, delegate to Iowa State Medical Society, and Dr. R. F. French, alternate.

Page County Medical Society

The Page County Medical Society met in annual session at the state hospital in Clarinda on December 3, at 1:30 p. m.

The following officers were elected for the ensuing

year of 1926: Dr. John O. Weaver, president; Dr. M. O. Brush, vice-president; Dr. J. F. Aldrich, alternate delegate. All the officers being of Shenandoah.

The following program was presented: Acidosis and Alkalosis, Dr. H. McK. Bunch. Review of the More Recent Progress in Goitre Treatment, Dr. A. O. Wirsig. Medical and Surgical Treatment of Gastric Ulcer, Dr. M. O. Brush.

A good attendance was present and it was voted to hold a chest clinic some time later in the year—April possibly.

J. F. Aldrich, Sec'y.

Palo Alto County Medical Society

A meeting of the Palo Alto County Medical Society was held on Wednesday, December 17 at Emmetsburg. A 6:30 dinner was given at the Waverly hotel and then to the city hall where the meeting took place. Dr. Hennessy and Dr. Nelson gave interesting discussions on subjects of interest to the profession. This program was followed by the election of officers for the ensuing year. Dr. J. A. Hennessy, Emmetsburg, president; Dr. H. L. Brereton, Emmetsburg, vice-president, and Dr. Huston of Ruthven, secretary.

Those who attended this meeting were Dr. Beatty of Mallard, Dr. Nelson of Ayrshire, Dr. Hession of Graetinger, Drs. H. A. and H. R. Powers, F. X. Cretzmeyer, H. L. Brereton and J. A. Hennessy of Emmetsburg.

Polk County Medical Society

The Polk County Medical Society met for its annual meeting and banquet at the Wakonda Country Club on the evening of December 21, 1925.

A very fine meal was served at 7:15 p. m. after which a short business meeting was held, presided over by the president, Dr. W. W. Pearson.

The application for membership of Dr. Donald C. Conzett was presented to the society, having been favorably passed upon by the board of censors. Dr. M. L. Turner moved that Dr. Conzett be elected to membership. Motion was duly seconded and unanimously carried.

The following bills were presented and allowed: Alpha Floral Company (flowers for Dr. Priestley's funeral, $10; L. K. Meredith (balance on commission and salary), $85.70; bills for banquet.

The secretary read the annual secretary-treasurer's report, which was referred to the auditing committee. The president appointed Drs. M. L. Turner, W. J. Fenton and E. J. Harnagel on the auditing committee.

Election of officers: On first informal ballot for president-elect, there were 107 votes cast of which Dr. Wilton McCarthy received 87, the balance were scattered.

Dr. M. L. Turner moved that the informal ballot be made formal and that Dr. McCarthy be declared elected as president-elect. Duly seconded and unanimously carried. A few words were spoken by the president-elect.

It was moved that nominations for vice-president and secretary-treasurer be made from the floor. Duly seconded and unanimously carried.

The name of Dr. J. A. Downing was presented for vice-president. As there were no other nominees, the president declared the polls closed and called a vote by acclamation. Dr. Downing was unanimously elected vice-president.

Dr. M. L. Turner moved that the present incumbent of the secretary-treasurer's office be re-elected for the year 1926. Seconded and carried.

Dr. M. L. Turner moved that a committee be appointed by the president to draw up resolutions in reference to the death of Dr. J. T. Priestley. Duly seconded and unanimously carried. The president appointed Drs. McCarthy, Bierring and Fay on this committee.

President D. W. Morehouse of Drake University then gave a very delightful and enlightening talk on "Where We Are", giving his audience a very good idea of the insignificance of our own solar system and upsetting entirely the idea of space for most of us. His talk was illustrated by lantern slides and was enjoyed by all.

After this Dr. W. W. Pearson spoke a few words and then introduced Dr. T. A. Burcham as the new president for 1926. Dr. Burcham gave a short talk.

The meeting was then adjourned and those that wished played bridge while others tripped the light fantastic to very excellent music by the orchestra which had played during the dinner.

Eighty-nine guests and 119 members were present.

L. K. Meredith, Sec'y.

Poweshiek County Medical Society

The members of the Poweshiek County Medical Society and their wives enjoyed their annual get together session Tuesday evening when they met at the Poweshiek Cafe for a period of refreshment and festivity. A delicious dinner was served and duly enjoyed after which the ladies were entertained at the Strand while the medical program was given with President J. T. Padgham presiding. Papers were read by Doctors E. S. Evans and P. E. Somers. Adjournment was then taken to the Dr. Evans home where the social evening was resumed with instrumental and vocal solos and a fine talk by Professor J. W. Gannaway. It was a successful and happy evening from every point of view.

Doctors Ringena and Simeral of Brooklyn and Wilcox of Malcom were present from out of town.

—Grinnell Herald.

Tama County Medical Society

The Tama County Medical Society held its December meeting in Tama on the fifteenth in the Commercial Club rooms. Immediately after luncheon the society was called to order by its president, Dr. Jacob Breid, who, in the regular order of business was re-elected president for the year 1926. A motion was then made whereby all the other officers were elected to hold over for another year, and Dr. M. L. Allen of Tama was chosen to act as delegate

to the State Meeting in May, with Dr. J. A. Pinkerton of Traer as alternate.

The business meeting was followed by a very interesting program consisting of a paper entitled, Intestinal Flu, by Dr. W. E. Carpenter of Tama, which brought forth much discussion, followed by a paper by Dr. J. E. Johann of the Bankers Life Insurance Co. of Des Moines, on Making Life Insurance Examinations, which was exceptionally instructive and interesting in this day and age of life insurance.

Albert A. Crabbe,
Chairman, Publicity Com.

Woodbury County Medical Society

Dr. F. E. Franchere was elected president of the Woodbury County Medical Society at a meeting held in the Jackson Hotel, Sioux City, Thursday evening, December 17. Dr. E. R. Parke, vice-president and Dr. Roy E. Crowder, secretary and treasurer; Dr. E. D. Frear, member of the board of censors.

Dr. A. C. Starry, in charge of the laboratory in St. Joseph's Hospital, gave an illustrated talk, choosing as his subject, Some Common Pathological Conditions of the Tonsil.

Dr. Milton Daily and M. G. Clark, superintendent of schools, appeared before the society and explained the state law of physical education and urged the members of the society to work in securing better enforcement of the statute.

Prior to the election of officers and business meeting, a banquet was held.—Sioux City Tribune.

Cedar Valley Medical Association

The Cedar Valley Medical Association held their regular monthly clinic December 17 at the Cedar Valley Hospital when Dr. H. Z. Giffin of the Mayo Clinic at Rochester addressed the meeting on Diseases of the Blood. About thirty-five doctors were in attendance and those from out of town included Doctors Henely and Roarke of Nora Springs, O'Keefe and Wilson of Marble Rock, Yenerich and Kruse of Rockford, Cordes of Rudd, Osborne of St. Ansgar and Call and Mayne of Greene in addition to two physicians from New Hampton.

A few of the local doctors entertained Dr. Giffin at dinner at Hotel Hildreth in the evening.

Shenandoah Medical Society

The Shenandoah doctors of the medical society held a get-to-gether meeting Tuesday night, December 15, at the Mizpath Hotel when a chicken dinner was served at six o'clock in the private dining room. The doctors decided to have a social meeting once a month, and Dr. J. F. Aldrich was elected as president and Dr. J. D. Kerlin as secretary.

Those present were: Dr. J. F. Aldrich, Dr. T. J. Putnam, Dr. B. S. Barnes, Dr. M. O. Brush, Dr. A. O. Wirsig, Dr. W. F. Stotler, Dr. H. McK. Bunch, Dr. J. D. Kerlin and Dr. L. L. Baker. The doctors will have a social time as well as discuss problems of interest to them at these monthly meetings.

Waterloo Medical Society

Dr. Alfred A. Strauss, Chicago, member of the staff of Michael Reese Hospital and one of the nation's foremost authorities on surgery of the stomach, addressed members of the Waterloo Medical Society on The Medical and Surgical Treatment of Gastric and Duodenal Ulcer, at the monthly meeting December 17 in Black's Tea Room.

Many doctors were present from Dubuque, Cedar Rapids and Charles City.

Dr. Strauss explained re-sectional work on the stomach, where entire portions of the organ are cut away and the walls rejoined.

INTER-STATE POST-GRADUATE FOREIGN CLINIC ASSEMBLIES—1926

The 1926 foreign clinic assemblies given under the direction of the Inter-State Post-Graduate Assembly of North America will cover a territory including the chief clinic cities of Italy, Switzerland, Germany, Austria, Czecho-Slovakia, Holland and Belgium.

The physicians are going abroad as the result of invitations extended, through this association, by the leading medical universities and institutions of the countries to be visited to the medical profession of North America.

The members of the party will sail from New York on April 28, a few days after the meeting of the American Medical Association at Dallas, Texas, thus, giving the physicians of the party plenty of time to attend this meeting.

The large first-class cruising steamer, the "Araguaya" of the Royal Mail Steam Packet Line has been chartered to take the physicians abroad. The party will land at Cherbourg and will go at once to Paris where the clinic assemblies start.

Dr. Carl Beck of Chicago, the general secretary for the foreign assemblies is now in Europe completing the clinic arrangements for the assemblies. The clinic cities to be visited are as follows: Paris, Rome, Florence, Padua, Milan, Berne, Zurich, Munich, Vienna, Prague, Berlin, Amsterdam, The Hague, Utrecht, Leyden and Brussels. There will be extension assemblies held in all other principal medical centers of Europe following the main assemblies.

It is of interest to note that a large per cent of the distinguished teachers, who will instruct the assemblies, speak the English language. However, there will be a director chosen from the teaching staff in each of the clinics, who will be able to speak good English in case the chiefs do not. It will be the duty of this director to present the history cases and to answer questions as an interpreter. This is one of the reasons why Dr. Beck is now in Europe.

The assemblies are open to members of the profession who are in good standing in their state or provincial society with no restriction to territory.

This invitation is understood to be extended to the entire medical profession of North America.

Admittance to the clinics and privileges of the tour will be protected by the issuing of an admittance ticket or card. This rule will be strictly enforced in order to protect the association in its membership requirements, which is, that a physician must be in good standing in his state or provincial society. We will not be responsible or admit physicians to privileges unless they are members of the group.

The members of the party will be limited to a number that can be accommodated comfortably in both the clinics and hotels. After careful consideration and consultation with the transportation department and the foreign clinics, this number has been fixed at five hundred, which includes members of the physicians' families. Necessarily this will limit the number of physicians to around three hundred.

Physicians may return home on three separate sailings during the main assemblies. First, at the end of the visit to Italy and Switzerland by way of Cherbourg; second, at the end of the visit to Holland from Rotterdam and third, at the end of the assembly in Brussels from the port of Antwerp.

It is necessary in order to hold space for the assemblies to send to the office of the managing-director, W. B. Peck, Freeport, Illinois, the sum of $65 per person. If for any reason the applicant for space decides that he cannot attend the assemblies, the money will be refunded immediately, if this demand is made as early as six weeks before sailing time. A booklet of information pertaining to the assemblies and prices for same may be secured free of charge by writing the managing-director's office.

Ladies' Entertainment—Besides the extensive sight-seeing and travel features, arrangements are being made for a ladies' entertainment committee in each of the clinic cities. The committees will be composed of the wives of the clinicians and prominent citizens.

In offering the foreign clinic assemblies this association has the hearty cooperation and assistance of the most distinguished teachers and clinicians in both North America and Europe. The organization in its endeavors hopes to combine with its success in postgraduate work a corresponding advancement in international good fellowship among the members of the medical profession of the different countries of the world.

A second section of the assemblies for a limited number will be conducted during the summer months for those who are unable to take advantage of the April sailing. The members of the party will leave New York S. S. "Pittsburgh" on June 19th, return sailing, August 13 from Antwerp S. S. "Zeeland".

The officers of the assemblies are: Dr. Charles H. Mayo, chief executive and general chairman, Rochester, Minnesota; Dr. Carl Beck, general secretary, Chicago, Illinois; Dr. William B. Peck, managing-director, Freeport, Illinois; Mr. Reeve Chipman, manager of transportation, Boston, Massachusetts.

PHYSICIANS NOT NEEDED AT QUINCY, ILLINOIS

December 16, 1925.

Dr. D. S. Fairchild, Sr., Editor,
Iowa State Medical Journal.
Dear Doctor:

Enclosed herewith please find a copy of the resolutions that were passed at a recent meeting of the Adams County Medical Society on December 14, 1925, without a single dissenting vote. We are anxious to give these resolutions as widespread publicity as possible and would greatly appreciate if you would be kind enough to publish them in the earliest possible issue of your journal under the heading, "Physicians Not Needed at Quincy, Illinois".

The Western Catholic Union Building management of Quincy is sending out letters broadcast over the country in an endeavor to induce physicians to come to Quincy to locate and occupy offices in their building. There is no way of curtailing this propaganda except through such journals as yours and the entire Adams County Medical Society will greatly appreciate if you will give this matter the publicity which it rightfully deserves. The side that the medical society takes in this matter is stipulated in the resolutions and we believe speaks for itself.

Adams County Medical Society,
Harold Swanberg, Sec'y.

Whereas it has been called to the attention of the Adams County Medical Society that the management of the Western Catholic Union Building of Quincy, Illinois, is sending out literature to physicians outside of Quincy stating "that there is a demand here" for physicians and surgeons, and that such management is endeavoring to induce physicians located in other communities to come to Quincy to practice their profession and secure offices in the W. C. U. Building, and,

Whereas at present there is an ample number of physicians in Quincy to take care of the needs of the people, which is testified by the following facts:

The A. M. A. states that at present (1925) there is an average of one physician to every 726 people in the United States. The 1925 A. M. A. directory gives the population of Quincy as 36,764 with seventy-two graduate physicians, making one physician to every 511 persons. It is claimed, however, that Quincy now has 41,000 people. A recent survey shows seventy-one graduate physicians here, which would make the physician to population ratio 1 to 577 even if Quincy's population be considered as 41,000 (U. S. Census Bureau estimates Quincy's population for 1925 as 37,500). Therefore it is easily seen that even if Quincy has a ratio of 1 to 577, it is much more than the average throughout the country (1 to 726) and that Quincy actually has now a surplus of physicians.

Whereas the spreading of such false information concerning the "demand" for more physicians in Quincy is apt to work a real hardship on physicians who may be induced to locate here by causing them

to give up a practice in other territories to come to a community that already has a surplus of physicians.

Be it resolved that the Adams County Medical Society at its regular meeting held at Quincy on the 14th day of December, 1925, protest this action of the Western Catholic Union Building management and that copies of this resolution be sent to all members of the Supreme Council of the Western Catholic Union, to the American Medical Association and the several state medical associations in nearby states as well as the Quincy press.

Adams County Medical Society (Ill.),
Harold Swanberg, Sec'y, Quincy, Ill.

COMMUNICATION FROM DR. W. W. HALE

Dr. D. S. Fairchild, December 23, 1925.
Clinton, Iowa.
Dear Doctor:

You remember Dr. Hale, of course. While the news came a little late, a notice in the Journal will be of interest to many of the older members of the profession. The Doctor is seventy-three years old and his recovery seems remarkable.

Lewis Schooler, M.D.

Cheyenne, December 21, 1925.
Dr. Lewis Schooler,
Des Moines, Iowa.
Dear Doctor:

Your letter was a glad surprise.

On the sixth of June, I was run down by a couple of high school boys on a crossing, as they were hurrying to a dance. I was just leaving Carnegie Library. Both femurs were broken, the left close to knee joint, the right a compound fracture, nose flattened, scalp wounds, etc.

Am now getting about the house on crutches, but knees not much good, not much flexion.

The right fracture must have involved the joint more than we thought, much crepitus and soreness as patella is moved about. Right leg shortened some. Feel pretty well discouraged at times and wonder if I will ever have enough flexion to get up and down stairs safely.

Ed Jones and Charles Campbell came in to see me while I still was in bed with casts.

Lee Lockwood and wife were here also during the summer. Mighty glad to see Des Moines people.

Think Dr. Priestley was the last of the men there when I came in 1880. The ranks are surely thinning.

Wishing you and yours the compliments of the season.

Yours truly,
W. W. Hale, M.D.

PERSONAL MENTION

Dr. R. A. Culbertson, formerly of DeWitt, a graduate of the Iowa University College of Medicine, has accepted a position at the Harken Hospital, Osceola.

Dr. John V. Littig, major in the medical division of the United States Army, who has been stationed in the Philippine Islands for the past two years, and was in the service since the beginning of the World War, will sail for the United States under orders to report to Washington, D. C.

A jury in federal court awarded Dr. Wilton McCarthy, Des Moines surgeon, damages of $26,077.69 in his suit against the United States Fidelity and Guaranty Company. Dr. McCarthy fell on a sidewalk and was injured, claiming that his fingers were numbed so that he was unable to continue his work. He claimed total disability. He brought suit against the company for $37,000 and will have received in all $123,150 in payments from insurance companies.
—Des Moines Tribune.

Dr. Charles Lyle Hawk, who has arrived in Iowa City to become a member of his alma mater's faculty, in which he will be associated with his preceptor of other days, Dr. Arthur Steindler, has had interesting experiences in the far, frozen north. He has been practicing medicine, and conducting a drug store, in Kodiak, Alaska, and was in the general hospital at Kennecot, Alaska, also, since he left State University of Iowa. He received his degree of M.D. here, in 1919. Kodiak is on the southwestern coast, and is about 1,600 miles from Seattle. Dr. Hawk shipped his car to that city, by boat, and then drove to Iowa from Los Angeles, following the Santa Fe trail. Miss Mabel Winifred Hawk, his sister, who received her liberal arts degree in 1911, has been teaching in Alaska, at Kitchikan. She anticipates coming to Iowa for a Yuletide visit.—Iowa City Press.

After more than three months abroad spent in research in Europe in connection with the work to be done under the $60,000 grant of the Rockefeller Foundation, Dr. Sampel T. Orton, director of the psychopathic hospital at the University of Iowa, has returned to Iowa City. The report of Dr. Orton's researches abroad will be ready in about a month. Enlargement of the program of the Iowa state psychopathic hospitals is the object of the Rockefeller gift. Research work is being conducted in investigating problems in the physiology of the brain. Funds made available by the Rockefeller gift will be used in establishing a mobile clinic for mental diseases, which will be available to communities throughout the state asking the consultation service.

Dr. and Mrs. Eli Grimes, 5115 Waterbury Road, Des Moines, will leave for a southern cruise. They will sail from New Orleans and make their first stop at British Honduras. From there they will go to Guatemala City, where they will spend a week visiting friends who are doing archaeological work. They expect to return within three or four weeks, landing at New Orleans.

Dr. Joseph Little Priestley and James Taggart Priestley, II, grandsons of the late Dr. James Taggart Priestley, will locate in Des Moines and carry on the work of their forefather. Just before the funeral services of Dr. Priestley, announcement was made that although one generation of the Priestley family, illustrious in American medical history, was closing its half century of public service in Des Moines, another generation of the same family would

take over the work of Dr. Priestley and continue his services. Dr. J. L. Priestley was graduated from the University of Pennsylvania last year, and is now completing his interne work at the University of Pennsylvania Hospital. His brother will be graduated from the same institution next spring.—The Tribune-News.

OBITUARY

Dr. Harry Ernest McCall was born on the old McCall homestead near Ogden, Iowa, April 26, 1875, and passed away at St. Louis, Missouri, November 23, 1925.

He received his high school education at Perry, entered the State University of Iowa in 1899 and received his medical degree in that institution in June, 1903.

In after years he did post-graduate work at the Chicago Polyclinic and Jefferson Medical College.

He started the practice of medicine at Diagonal, Iowa, in 1903, and moved to Clearfield in 1905, where he continued to practice until failing health compelled him to retire from active practice about four years ago.

On June 7, 1906, he was united in marriage to Miss Bertha Jennings of Diagonal, who passed away at the birth of their only daughter, Agnes, October 31, 1908. On August 28, 1912, he was married to Miss Pearl Bailey of Diagonal, Iowa.

He enlisted in the United States Army in May, 1918, was commissioned captain in the medical corps, and received his discharge in March, 1919.

Dr. M. F. Riordan was born in County Kery, Ireland, November 19, 1851, and died at Fulton, New York, December 10, 1925. He made his home at Melrose, Iowa, from 1878 until April 15, 1912. He was married at Melrose, May 2, 1886, to Miss Delia Sullivan. They lived many years at Melrose, loved and respected by all. On April 15, 1912, they went East and made their home at Fulton, New York. Mrs. Riordan died in December, 1912. He was married October 27, 1914 at Pittsfield, Massachusetts, to Miss Elizabeth Eldridge. They made their home at Melrose, later going to Fulton where they lived until his death.

He is survived by his wife and one brother, Patrick Riordan of Providence, Rhode Island.

Dr. C. B. Kimball, seventy-four, physician in West Liberty for the past forty years, died shortly before noon as a result of a paralytic stroke, December 25.

Dr. Kimball was the son of Franklin and Lydia Kimball and was born in Iowa City. Besides his wife, he is survived by two children, Dr. J. E. Kimball of West Liberty and Mrs. Orville Martin of Sayre, Oklahoma. One sister, Mrs. Alta Leighton of Akron, Ohio, also survives.

We are called upon to note the deaths of two of our distinguished surgeons, one due to heart disease, Dr. John Bottomly of Boston, who fell a victim to this disease in the midst of his greatest usefulness, at the age of fifty-six years. The other, Dr. Richard Harte of Philadelphia, at the age of seventy years, of pneumonia.

Dr. Richard Hickman Harte was born at Rock Island, Illinois, October 23, 1855. His father was a steamboat captain on one of the Mississippi River boats, and in late years it has been a source of great pleasure to Dr. Harte to visit the scenes of his boyhood days in cruising up and down in the Mayo boat. In 1878 he married Marlia H. Ames of Boston, who brought him considerable wealth, which enabled him to retire from active work some years ago.

Richard Hickman Harte, formerly director of health and charities of Philadelphia, died November 14, aged seventy, at a hospital in Vicksburg, Mississippi, of pneumonia. Dr. Harte graduated from the University of Pennsylvania School of Medicine, Philadelphia, in 1878. After serving as resident physician at the University Hospital and studying in London and Paris, he formed an association with the Pennsylvania Hospital which continued until his death. He was formerly adjunct professor of surgery at his alma mater and on the staffs of St. Mary's, Orthopedic, Gynecean, St. Timothy's, Bryn Mawr (Pa.) Episcopal and Abington (Pa.) hospitals. Dr. Harte served in the American Ambulance Corps in France in 1916, then with the British Expeditionary Forces, and later was a colonel in the U. S. Army Medical Department. He was decorated for conspicuous service by the British and the Belgian governments and was awarded the American distinguished service medal. He was a past president of the College of Physicians of Philadelphia, the Philadelphia Academy of Surgery and of the American Surgical Association (1911); a member of the American Society of Clinical Surgeons; the author of a "Handbook on Local Therapeutics"; for twelve years editor of the "Transactions of the American Surgical Association" and a frequent contributor to medical journals.

Dr. John Taylor Bottomly, for many years surgeon-in-chief of the Carney Hospital, died suddenly of heart disease in his office in Boston, December 17, 1925, after having operated in and visited two hospitals during the day.

John Taylor Bottomly was born in Lee, September 24, 1869, the son of John and Ellen Ryan Bottomly. He was educated at Holy Cross College, where he received the degree of A.B. in 1889. In 1894, after completing his course, he received the degree M.D. at Harvard Medical School. He was first assistant surgeon of the Massachusetts hospital ship, the Bay State, during the Spanish War, and served in the Medical Reserve Corps after that.

He began practice in Boston in 1897, and in 1899 was appointed visiting surgeon at the Boston City Hospital. In 1901 he was appointed an assistant in surgery at the Harvard Medical School, and from the same year until 1903 he was supervising surgeon at the Haymarket Square Relief Hospital.

From 1902 until 1910 he was on the surgical staff of the Carney Hospital, and in the latter year was appointed surgeon-in-chief. He was a lecturer in the Harvard Graduate School of Medicine, consulting surgeon at the Haverhill City Hospital, Josiah B. Thomas Hospital in Peabody, the Union Hospital of Fall River, the Burbank Hospital in Fitchburg, the Leominster Hospital, the Framingham Hospital, a Roman Catholic Fellow of the College of Surgeons, a Fellow of the American Medical Association, the Massachusetts Medical Society, the American Surgical Society, the Society for Clinical Surgery, the Military Medical Society, and the University, Union and Harvard clubs.

In the World War he was a captain in the Medical Corps, using excellent judgment in making physical examinations of candidates for enrollment, and was a member of the Boston Chapter of the Military Order of the World War. He is survived by his wife, who was Mary Agnes Kenney of Roxbury, and by three sons and two daughters.

BOOK REVIEWS

INFECTIONS OF THE HAND

A Guide to the Surgical Treatment of Acute and Chronic Suppurative Process in the Fingers, Hand and Forearm, By Allen B. Kanavel, M.D., F.A.C.S. Professor of Surgery, Northwestern University Medical School; Attending Surgeon, Wesley Memorial Hospital, Chicago. Fifth Edition, Thoroughly Revised. Illustrated with 196 Engravings. Lea & Febiger, 1925. Price, $5.50.

This is a book for everybody in the medical profession, for it deals with conditions which every practitioner may have to deal with. The parts affected by infection are vital, especially to the people who earn their daily bread. We need not refer to the anatomical relations of the lymphatics, or the lines of least resistance for the passage of infections, but we may stop long enough to state that infections of the finger, hands and forearm are very liable to be due to a most virulent type of microorganism and set up a most destructive form of inflammation which may result in a serious crippling of these parts. It frequently happens that cases of infection are neglected before they come to the notice of a physician, and too frequently the physician does the wrong thing, when they come to him, in his anxiety to relieve his patient in the quickest manner and uses his scalpel too liberally and establish new foci of infection, or he may use it at the wrong place. It is not easy to determine the best course to pursue but one principle may be kept in mind, that of conservation and conservatism. Dr. Kanavel has given these infections very thorough study and has had every form of experience and no one can speak with greater authority. It too often happens that the practitioner looks upon hand infections as a minor subject in surgery and fails to prepare his treatment with sufficient seriousness. There has, however, been a material improvement in treatment since Dr. Kanavel started his campaign for better things.

We cannot do better than to urge a thorough study of Dr. Kanavel's book, not only as to the treatment of hand infections but, also, to remedy the crippled hand after the damage is done, for on account of the delays in consulting a physician and the best of late treatment, there will be crippled hands and fingers which can be greatly improved by patient and persistent treatment at the proper time.

A MANUAL OF PHYSICAL DIAGNOSIS

By Austin Flint, M.D., L.L.D., Late Professor of the Principles and Practice of Medicine and of Clinical Medicine in Bellevue Hospital Medical College, Etc.; Ninth Edition, Revised by Henry C. Thacher, M.S., M.D., Attending Physician, Lincoln Hospital and Assistant Attending Physician, Roosevelt Hospital, New York. Lea & Febiger, New York, 1925. Price $3.25.

The purpose of this book is set forth in the preface in which it is said: "Advancement in the laboratory side of diagnosis has in recent years discouraged the acquisition of that thoroughness and skill in the employment of simpler methods, which were so essential to the earlier masters of Clinical Medicine". It is recognized today that an equipment of an expensive character is necessary to a scientific examination and diagnosis: that is, the employment of instruments of precision is essential and that without them, the physician becomes careless. It seems to be overlooked by many, that great work in diagnosis was accomplished by men who did not have access to expensive instruments of precision and laboratories when by simple means of examination and by intellectual process a reasonably accurate diagnosis was made. There can be no controversy as to the advantages of such equipment for diagnosis, but it is contended that by simple methods and a close study of the patient will lead to a diagnosis.

This volume sets forth the methods to be employed by the everyday doctor in his study of patients, who is obliged to use his various faculties in diagnosis. He will, also, find these methods of intellectual employment helpful, if in the future he should be surrounded by the most modern methods. He should, in the beginning, not fall into the habit of relying on machine methods too much.

THE SURGICAL CLINICS OF NORTH AMERICA

Vol. V, No. 2, April, 1925; 337 Pages, with 105 Illustrations. Price Per Clinic Year, Paper, $12; Cloth, $16 Net. W. B. Saunders Company, 1925.

This is a New York number. The first section is a clinic group of Dr. Eugene H. Pool, at the New York Hospital, including six numbers, introduced by

(Continued on advertising page xxxi)

BOOK REVIEWS

(Continued from page 100)

Dr. Eugene H. Pool, "Suspected Ectopic Gestation".

At the New York Post-Graduate Hospital comes the clinic of Dr. John F. Erdman, including a number of important cases.

At the New York Post-Graduate Medical School and Hospital is the clinic of Dr. Charles Gordon Heyd, presenting a discussion of "Hyperthyroidism".

An important group of cases is presented at the Lenox Hill Hospital under the direction of Dr. Willy Meyer, Dr. Fred H. Albe presents a series of eight cases at the New York Post-Graduate Hospital on bone and joint surgery. At the Neurological Institute, department of neurological surgery, Dr. Byron Stookey presents a clinic which includes four cases of spinal cord tumors. At the Lenox Hill Hospital, clinics are presented by Dr. De Witt Stetten and Dr. Carl Eggers, and at Mt. Sinai Hospital by Dr. Sidney Zankaner.

Under the direction of Dr. George Gray Ward, with seven associates, a gynecological clinic is presented at the Woman's Hospital. And at the Presbyterian Hospital Dr. Whipple directs an interesting clinic. Finally, at the surgical department, Cornell University School of Medicine, Drs. Charles E. Farr and Margaret Friis presents a clinic on "Congenital Occlusions of the Bowel".

We have considered this number in unusual detail because of the arrangement. We have heretofore expressed the advantages of carefully classified arrangement of the clinical material as having advantages over the haphazard plan sometimes observed.

THE NATIONAL HEALTH SERIES; TWENTY HEALTH BOOKS

Edited by the National Health Council.
Published by Funk & Wagnalls, New York.

We have on previous occasions presented a list of these valuable little books, which are sold at 30 cents each, except the last five now offered. The character of the books are indicated by the titles and the names of the authors.

"The Human Machine"—How the body functions. By W. H. Howell, Ph.D., M.D., LL.D.; Sc.D.; associate director, School of Hygiene and Public Health, Johns Hopkins University.

"The Young Child's Health—By Henry L. K. Shaw, M.D., clinical professor, diseases of children, Albany Medical College. How to care for the runabout child from two to six years old.

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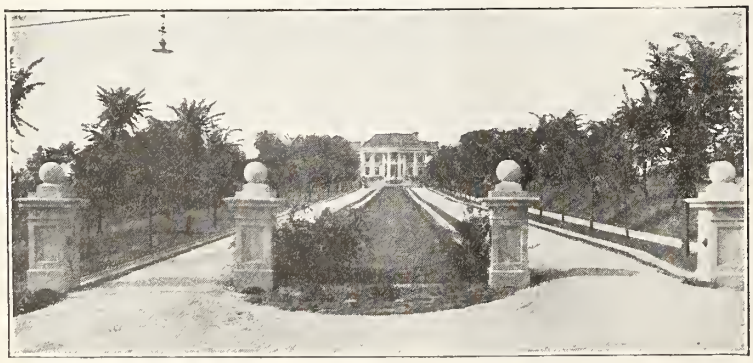

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THE DIAGNOSIS OF BRAIN TUMOR*

Walter E. Dandy, M.D.
Associate Professor of Surgery Johns Hopkins Hospital, Baltimore

The progress of brain surgery, as indeed of all branches of surgery, is to a very large extent dependent upon the accuracy of diagnosis. True, the mastery of the mechanical part of surgery has been a long tedious and difficult struggle of experiment and of trial and error; brain surgery is still difficult, but gradually it has developed to a point where it is fairly adequate to cope with the surgical possibilities. The dawn of brain surgery appeared with a knowledge of cerebral function. The clinical and pathological observations of Broca (1861) and Hughlings Jackson, supported by the later stimulation of the experiments of Fritsch and Hitzig and of Ferrier, all in the early seventies, for the first time gave certain areas of the brain a definite function. Prior thereto, neurologists at times knew that patients were afflicted with brain tumors but, of course, could not determine their location. Soon thereafter, Lister, by introducing modern surgery, made possible the practical application of this cerebral localization—i. e., the advent of brain surgery. Brain surgery was pioneered by that great master, Victor Horsley, who made the most of these combined discoveries. While brilliant results have since been attained, they have been more or less along technical lines and of less fundamental significance. The real results of brain surgery have, on the whole, been disappointing. There are several reasons for this: First, operative difficulties are great and serious; second, many tumors are of such a character or position as to be impossible of removal, and third, difficulties in localization of the growth.

I shall pass lightly over the first two deterrent features of brain surgery. It is principally the last-named difficulty—namely localization of the intracranial lesion—that I wish to consider. It is doubtless known to all of you that tumors of the brain are still exceedingly difficult to localize. Usually we may say with a fair degree of assurance that the patient has a tumor of the brain, but the localization of the tumor or other lesion, requires all the resources at our command. The great silent areas of the brain - silent because their function is not yet known—harbor growths of tremendous size and yield to the host no indication of their situation by signs or symptoms. Since Horsley's time, the only improvement in diagnosis has been the x-ray. About ten years ago our statistics showed that less than 50 per cent of all brain tumors could be localized, to such a degree that they could be found at operation, using all the resources at our command. At the present time, the results are a little higher: 60 to 65 per cent can be localized. The improvement of 10 to 15 per cent in diagnosis can be attributed to the results of far better x-rays, better surgery and to an increased experience with brain tumors.

With the usual methods of neurological and roentgenological examination, you are all more or less familiar, for the group of unlocalizable tumors, comprising at least 35 per cent of all brain tumors, the localization can now be made by injecting air into the spaces of the brain. It is upon this particular phase of intracranial localization that I wish to direct your attention. From a series of lantern slides you will see better than I can tell you the results of the method.

The procedure consists in withdrawing cerebrospinal fluid from the ventricles or subarachnoid spaces of the brain and substituting in its place, air. This medium, being of lesser density than the fluid which it replaces, throws a shadow of these spaces on the x-ray plate, just as thorium or iodides throw shadows of the urological tract with media of greater density. Our customary procedure is to tap a lateral ventricle, withdraw its fluid, inject air and take roentgenograms of the head in various positions in order to show the various parts of the ventricular system.

*Address in Surgery, presented before the Seventy-Fourth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 13, 14, 15, 1925.

From the changes which are found by contrast with the normal cerebral ventricles, i. e., in size, shape or position, we are able to deduce the situation of the tumor; for all tumors which give signs of intracranial pressure will produce some change in size, shape or position of one or more of the cerebral ventricles. By that I do not mean that all brain tumors distort or change the size, shape or position of the ventricles, but that all brain tumors which give symptoms of pressure, produce one or more of these changes, which should make a diagnosis possible.

Brain tumors give rise to two types of signs or symptoms: (1) those of localizing character and (2) those of general pressure. If the patient has localizing manifestations, the localization of the tumor is made without the use of the x-ray or without the use of air injection. If there are no localizing symptoms, the only other symptoms which the patient can have are those of pressure. Therefore, it can be said that practically all brain tumors which give symptoms can be localized, either by the localizing symptoms or by the use of the x-ray with or without the injection of air.

There is one group of tumors in which the use of air is less absolute. This is the group which gives a bilateral hydrocephalus and in which two lateral ventricles communicate freely. All we can say from the ventriculograms is that we have a lesion between the aqueduct of Sylvius and the foramen of Magendie but with very few exceptions this is sufficient information to allow us to find the tumor at operation. If we know that a patient has hydrocephalus, then we should be able to find the tumor at operation; that is, the operations which we now have are adequate to find practically any tumor.

In the treatment of brain tumors, as in surgery elsewhere, we must have an accurate diagnosis and a precise localization. If we do not have these, our surgery is bound to suffer. The treatment of brain tumors particularly calls for very formidable procedures, which should not be misplaced. You will note that I pass over any palliative treatment—such as decompressions—of brain tumors. Palliation is a procedure only for tumors which are known not to be removable. The only treatment which carries any hope to the patient, is a complete removal of the tumor. A considerable proportion of brain tumors can be removed completely if the proper diagnosis and treatment are made in the early stages.

Another important feature of the diagnostic value of air injections is in the elimination of tumors. Many patients have symptoms and even signs regarded as almost pathognomonic of brain tumor, but due to other known or unknown conditions. In most of these cases, the diagnosis of brain tumors can be excluded by the air injections.

Just a word as to the procedure. It is very dangerous. There has been a tremendous mortality from its use. However, if judiciously used and only by one thoroughly skilled in intracranial surgery, the danger is minimal. I have had three deaths at the beginning of my series and since then none. If properly handled, it should carry very little danger to the individual and certainly the danger in proper hands is small compared to the dangers attending cranial operations based upon guesswork.

There are many pitfalls in the interpretation of the x-ray findings; it is certainly not a simple, foolproof interpretation; it requires much experience. We have made mistakes in our interpretation and it is only as our experience widens that we have attained an assurance that the localization can be made with a degree of precision approaching 100 per cent.

A series of lantern slides was shown in which tumors were located by ventriculography in practically every part of the brain; frontal tumors, temporal tumors and occipital tumors, showing obliteration of the ventricle on the side of the tumor and the dislocation of the other ventricle away from the tumor; tumors of the ventricular system show a block in the ventricle and distension of the ventricle behind the tumor owing to the inability of the cerebrospinal fluid to escape; third ventricle tumors give a bilateral hydrocephalus but the ventricles fail to communicate with each other. Tumors of the aqueduct of Sylvius and of the posterior cranial fossa cause a bilateral hydrocephalus with communication between the lateral ventricles. Every tumor of the brain causing symptoms of pressure changes in some way the size, shape or position of the ventricular system and, therefore, leaves its marks of positive localization.

DR. FALLS GOES TO THE UNIVERSITY OF ILLINOIS

We are informed by the Journal of the American Medical Association, that Dr. F. H. Falls of Iowa City has accepted the appointment of professor and head of the department of obstetrics and gynecology at the University of Illinois, College of Medicine, Chicago, and that Dr. Carl A. Hedblom, formerly of the Mayo Clinic and professor of surgery at the University of Wisconsin, Madison, has been appointed as professor and head of the department of surgery at the University of Illinois.

THE THYROID: DIAGNOSIS AND TREATMENT, MEDICAL CONSIDERATIONS*

E. G. Senty, M.S., M.D., F.A.C.P., Davenport

Advance in medicine has always been steady and progressive and this has been particularly true during the past two decades. During this period many new ideas and facts relative to the thyroid have been brought forward and much has been accomplished toward solving the mysteries of this important gland. The result is that there is at present a reawakening of the interest in the diagnosis of its diseases as well as a decided advance in their treatment.

Goitre has been observed from the earliest times. It is said that Confucius noted this growth; certainly it was known to physicians of ancient Egypt and the Greeks and Romans described it in detail. Caesar crossing into Gaul, observed it among the villagers and it is said that his legionaires hurled the contemptuous epithet "Christian" at the stunted Swiss idiots with swollen bodies and coarse stiff hair, whom we know today as Cretins. (Ross.)

From the beginning physicians and laity have suspected that goitre was connected in some way with the water supply. The Greeks used sea water, Roger of Palermo prescribed ashes of sponges and sea weeds, Peter Forest, a Dutchman of the sixteenth century, the brine in which sea shells had been boiled, while along the Magdalena river the Indians used salt from one special salt lick discarding that from another which had no curative properties, though it tasted and looked the same.

In 1895 iodine was found by Baumann to be the normal constituent of the thyroid gland. In 1914 Kendall isolated the active agent of the thyroid, an iodine compound, which he called thyroxin. Recent investigation shows that there is approximately 14 mg. of this substance in the tissues (exclusive of the thyroid itself) and that about 1 mg. is utilized by the body daily (Plummer). In addition it has been shown that when iodine storage in the thyroid falls below 0.1 per cent that enlargement of the gland occurs.

Concerning the function of the thyroid little apparently is known. Plummer says that the essential function of the gland is the elaboration and delivery to the body of thyroxin, while Marine states that the function of the thyroid is that of controlling the utilization of oxygen in the tissue (in other words metabolism) and that this is dependent upon the presence of organic iodine. This is taken from the circulation and elaborated by the thyroid into a more active form in the colloid of the acini.

With the above information at hand it becomes quite self-evident that the question of simple goitre formation is one which has to do with deficiency in iodine supply. It is common knowledge that at such times as puberty or pregnancy when physiological activity is increased, demand for iodine is greater than normal and in the absence of necessary amounts, a hyperplasia of the gland must necessarily result.

Simple goitre is endemic in various localities notably in the Great Lakes region, the northwestern portions of the United States, and Canada. In a large portion of Switzerland 70-90 per cent of the population is affected. The meritorious work of Marine and Kimball has convinced us that the iodine content of drinking water in these regions must be particularly low. In the state of Michigan a survey in 1922 revealed the astounding information that 30 per cent of the school children of Grand Rapids were goiterous. In Wexford county with the iodine content of the water 0.5 parts per billion, simple goitre was present in 55 per cent of the children; in Houghteon county with no trace of iodine in the water supply the rate was 66.4 per cent. Such information has done much to arouse interest in this condition among physicians as well as the laity.

Complete loss of function or absence of the thyroid in children results in the well known picture of cretinism, while in the adult produces the notoriously frequently overlooked disease called myxodema.

Classification of Goitres

Although the subject of goitre is complex and the ideas regarding various types as found in the literature confusing, a more comprehensive idea of the goitre question is obtained if the simple classification suggested by H. S. Plummer is accepted. Plummer maintains that there are but three definite types of goitre, namely: (1) colloid; (2) adenomatous, and (3) exophthalmic, and that all others including tuberculosis, malignancy, syphilis, thyroiditis and actinomyces are either variations or combinations of these three varieties.

Colloid Goitre—In young individuals by far the most common type of goitre found is the colloid variety, commonly known as physiologic endemic, epidemic, sporadic or adolescent goitre. This form is noted most frequently during the adolescent period (10-18) but it is also to be found in

*Presented before the Seventy-Fourth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 13, 14, 15, 1925.

the early twenties, usually disappearing before thirty years of age. It is about six times more frequent in girls than in boys. It is commonly noted during pregnancy. This gland is large, smooth and symmetrical. It is usually quite soft and granular and only rarely can bruit or thrill be demonstrated on examination. The gland is characterized by an excess of colloid in the acini. It is symptomless except on rare occasions when pressure symptoms are produced. Rarely are there adenomata present, and if so, these are usually very small and of no immediate consequence.

Adenomatous Goitre—The most common type of goitre found in the adult is the adenoma or what is commonly known as nodular, irregular or cyctic goitre in contradistinction to the soft firm smooth colloid variety. Two types are today recognized, the simple non-toxic adenoma or adenoma without hyperthyroidism, and the adenoma with hyperthyroidism called toxic or hyperfunctionating adenoma.

Nontoxic Adenomatous Goitre—Adenomata are probably produced by activation or stimulation of the so-called foetal rests or embryonic cells of the thyroid or the change may result in adult thyroid as a result of long standing goitre (Allen).

Gradual growth continues until the nodular tumor is plainly visible and palpable. Adenomata are encapsulated and frequently break down due to hemorrhage, cystic or even at times bony or calcareous degeneration. At such times if too much of the vital glandular element is involved a condition of hypothyroidism may result. Adenomata are usually embedded in a colloid thyroid and growth is so slow that early in life they do not function, or at least do not hyperfunction. Simple adenomata frequently develop to huge proportion and may produce symptoms by pressure on the trachea, esophagus or nearby vessels. They may become substernal (13.5 per cent) or intrathoracic (0.6 per cent), (Pemberton) and cause alarming pressure symptoms. Roentgen ray is of service in the diagnosis of this condition and should be used in all cases in which dyspnea, etc. are complained of.

As a rule adenomata are present to the patient's knowledge for at least fourteen to seventeen years before they cause him to seek medical aid, in fact many patients go through life without any toxic symptoms developing.

Toxic Adenomata

Plummer in 1909 called attention to the fact that a percentage (at least 20 per cent) of the adenomata of the thyroid produced toxic symptoms similar to those of exophthalmic goitre but without exophthalmus and he designates this type as toxic or hyperfunctionating adenomata. This disease is one of middle life and symptoms do not as a rule develop until late, that is, until the patient is at least past forty years of age and until the adenomata have been noticed for a long time. The diagnosis is frequently difficult because these patients are usually suffering with a chronic, slow, progressive hyperthyroidism manifested by, attacks of palpitation and tachycardia, dyspnea, hypertension, high pulse pressure, weakness, nervousness, loss of weight and strength and frequently a noticeable increase in sweating. The thyroid has been present for some time and appears innocent. The result is that these cases very frequently go unrecognized and are usually considered as cardiorenal disease. Basal metabolism is always moderately elevated in such cases and should make the diagnosis certain. A thyroid crisis is seldom if ever seen in hyperfunctionating adenoma.

Present information, particularly that of Plummer seems to favor the theory that the cause of hyperthyroidism in toxic adenomata is due to the tissue of the adenoma itself hyperfunctionating and the recent valuable contribution of Wilson tends to substantiate this. He found that 90 per cent of the patients with nodular thyroids with symptoms of hyperthyroidism and no exophthalmus and with basal metabolism rate 20 plus or above showed moderate degrees of cell hypertrophy and hyperplasia associated usually with some colloid storage, also some follicles lined with hyperthrophic parenchymal cells and containing little or no colloid, and if present distinctly lighter staining than in the nontoxic adenomata.

Exophthalmic Goitre

Exophthalmic goitre was accurately described by Parry early in the eighteenth century, later by Morgani, and then by Graves in 1835 and Basedow in 1840. The writings of the latter two were so impressive that today the terms Basedow or Graves disease are used interchangeably. The thyroid in exophthalmic goitre is rather symmetrical and firm. As a rule one may hear definite bruit over the gland and thrills are often palpable especially over the superior poles. The gland is definitely overworked and puts out an incomplete thyroxin.

On microscopic examination, a rather marked hyperplasia and hypertrophy of the parenchyma of the gland, usually in proportion to the clinical symptoms, is noted.

Exophthalmic goitre is a disease most frequently encountered in early adult life, usually before forty years of age, in contradistinction to

the adenomata which usually develops after forty. I have however seen two cases of exophthalmic goitre in children under ten years of age. The onset is usually rather abrupt and frequently coincides with the appearance of the goitre unless it had been superimposed on a colloid thyroid. It is however a disease chronic in character. The symptoms are very characteristic and they make their appearance much in the order as follows:

(1) *Goitre*—The toxicity is frequently in direct proportion to the increase in size of the gland.

(2) *Stimulation* is probably first noted. Patients are very nervous, excitable and extremely apprehensive. They are frequently irritable and restless and often complain of insomnia.

(3) *Vaso motor Disturbances* are the rule. The commoner symptoms are; a feeling of warmth, a flushing of the face and redness of the chest, a noticeable increase in sweating and a very pronounced intolerance to heat, so much so that they are uncomfortably warm under atmospheric conditions that to others are cold or comfortable. Some cases show trophic disturbances of the skin and nails and hair.

(4) *Tremor*—The tremor is very fine and rapid, eight to ten per second and should not be confused with a coarse tremor. It is particularly noticed on the hands, but may be seen around the mouth or involving the tongue. It is however a common finding in neurasthenic individuals.

(5) *Tachycardia*—Early in the disease tachycardia is noted. At first it may be preceded by palpitation on exertion but soon the rate becomes persistently rapid varying from 90 to 180, depending upon the severity of the disease. Exophthalmic goitre should be seriously considered in any and all patients with persistently rapid pulse. Auricular fibrillation is a common finding and should suggest the possibility of hyperthyroidism.

(6) *Loss of Strength* is soon complained of and the exhaustion is usually out of proportion to the task attempted. It is particularly noted in the quadricep muscles when climbing stairs. It is easily elicited by asking the patient to step up on a chair or upon the step of the examining table. Severe cases will be unable to do this, while moderately severe cases will require some help. Coincident with the loss of strength is noted a corresponding loss in weight and this is present in spite of the fact that the patient has an exceptionally big appetite. This is accounted for by the general increase in body metabolism which is characteristic of exophthalmic goitre. For this reason, unaccountable loss of weight should suggest thyroid toxicity as a possible diagnosis at once.

(7) *Exophthalmus*—This is the most characteristic symptom of the disease; it is noted in probably from 90 to 95 per cent of the cases, appearing during the first six or eight months in at least 50 per cent of these cases. Varying degrees of exophthalmus are noted, varying from mild and hardly noticeable to such cases so extreme as to displace the eye ball from the socket. A peculiar widening of the palpebral fissure—a staring appearance is very common.

(8) *Diarrhoea* is frequently noted in this disease, and it must be remembered that this too is a symptom and is usually significant of marked toxicity and frequently of a crisis or impending crisis.

(9) *Nausea and Vomiting*—Along with diarrhoea is frequently noted nausea and vomiting and this is in itself a rather alarming symptom which calls for immediate attention. Under no conditions should surgery be attempted at this time.

(10) *Mental Changes*—When hyperthyroidism has persisted for some time and has been disregarded, one frequently encounters various degrees of mental depression varying from delirium, hysteria or mild psychosis to actual insanity. It should be remembered that such cases are not uncommon.

(11) *Jaundice*—I have seen several cases of exophthalmic goitre with jaundice. This symptom is usually significant of serious degenerative changes but is not incompatible with recovery.

(12) Finally—Basal metabolic rates are of paramount importance in the diagnosis of hyperthyroidism and particularly in estimating the degree of toxicity present. Basal metabolic rate is the measurement of heat production or oxygen consumption in a fasting individual at absolute rest. Fully 95 per cent of all abnormally increased rates in individuals without febrile conditions are due to exophthalmic goitre or toxic adenomata. Basal metabolic rates are normal in neurasthenic individuals simulating mild hyperthroidism in which an enlarged thyroid is a coincidental finding.

Basal metabolic rate readings are particularly useful in borderline cases and consequently extreme care must be observed to eliminate all technical errors. Nervous individuals must be assured of the simplicity of the test, as restlessness and uneasiness tend to increase the rate. All borderline cases should have repeated readings, as subsequent tests with the patient at mental ease are prone to become lower.

At present, basal metabolic rates between minus 10 and plus 10 are considered normal, and the

greater the variation above or below these limits, the more significant becomes the reading.

As stated by Pemberton exophthalmic goitre may be either remittant or chronic. In the remittant form the onset is usually gradual and toxicity may be increased by shock, worry, fright, etc., and progress until a crisis is reached. If this is successfully passed, the patient enters on a period of remission and may be entirely well and remain so or only partially well and suffer from subsequent exacerbations. It has been said that not infrequently exophthalmic goitres burn out and become symptomless, that is, no longer hyperthyroid. In such cases usually five or more years have elapsed and irremediable degenerative changes have usually resulted.

In the chronic type of exophthalmic goitre the disease usually runs a rather even course and is not associated with the crisis. This type too eventually ends in marked degenerative visceral changes of a serious nature.

Treatment of Goitre

Colloid Goitre—The work of Marine and Kimball has shown what can be accomplished as a preventive measure in the treatment of colloid goitre. They recommend 2 gms of sodium or potassium iodide over a period of two weeks and repeated twice yearly, or grain 1 potassium iodide daily for thirty days and repeated twice yearly. This can be carried out by feeding medicated chocolate candies that are on the market today or by means of small tablets daily, containing 10 mg of iodine over ten day periods two times a year. Recently iodine prepared table salt has been put on the market to be used the year around, the objection to this method of medication being that the amount given cannot be estimated and if used at the table may cause activation of a quiet adenoma in some adult member of the family. It is probably a good procedure to give 10 mg potassium iodide weekly during pregnancy as this will prevent physiological hypertrophy in the mother and prevent goitre in the new born. Preventive measures for a few generations would do much to eliminate goitre. In the treatment of colloid goitre in children iodine in 10 mg. doses weekly will do much toward reduction in size of the gland if only simple goitre is present. Careful metabolic studies are necessary if thyroid extract be used in this condition.

By no means should surgery be resorted to in colloid goitres unless so large as to produce disturbing pressure symptoms, as the enlargement is very prone to reoccur or a degree of hypothyroidism result.

Adenomata Without Hyperthyroidism

It is quite well known that adenomata may persist during a patient's life time and remain symptomless. On the other hand, at least 20 per cent become toxic so slowly and insidiously that much permanent damage may be done before relief from surgery is obtained. In addition malignant change can be expected in 2 per cent. For this reason surgery is advisable in this type, as the mortality in experienced hands is but one-fourth of one per cent. This should not, however, be urged before the age of twenty-five or thirty years, unless symptoms are marked, the thyroid is becoming substernal or intrathoracic, or unless malignant change is suspected, as there is a definite chance for recurrence or completed growth of smaller adenomata present and not recognized at the time of the operation.

One cannot too strenuously criticize the promiscuous use of iodine and the goitre cures now advertised in the lay newspapers. It is due to these methods that a very large percentage of non-toxic adenomata are now made toxic. I have recently seen a young woman with a non-toxic goitre made toxic by the use of a goitre cure over a period of five months. I saw this patient in a condition of extreme hyperthyroidism with nausea, vomiting, diarrhea, mental symptoms and finally death. Cases such as these demonstrate very forcibly the seriousness of the indiscriminate use of iodine medication in goitre cases when the type of goitre present is not understood and emphasize that adenomata do not tolerate iodine therapy.

Toxic Adenomata—At the present time there is but one successful method for the cure of toxic adenomata and that is enucleation or thyroidectomy. Preoperative treatment other than rest and fluids and large caloric diet is of no benefit. Ligation likewise is of no benefit. For this reason and on account of the insidious onset of the disease, the surgical mortality has not been reduced as much as had that of operations for non-toxic adenomata and exophthalmic goitre. The results of surgery are particularly gratifying and so successful that a cure can be expected in at least from 80 to 85 per cent of the cases, with no benefit in but 2 per cent (Judd).

Exophthalmic Goitre — While exophthalmic goitre is usually an acute disease nevertheless it should not be considered as an emergency. As stated above, the disease is characterized by crisis or waves, and it is the treatment of the crisis that is paramount since it is during this state of extreme hyperthyroidism that death occurs. The most recent and valuable contribution toward the

medical management of exophthalmic goitre is that of Plummer in which he advocates the use of Lugol's solution and reports astounding results. Lugol's solution is a 5 per cent aqueus solution of iodine and 10 per cent solution of potassic iodide and is recommended in ten drop doses once daily in ordinary cases of exophthalmic goitre while in severe cases the same dose or more three times daily is necessary. If nausea or vomiting is present the same dosage is given per rectum until vomiting ceases after which time the treatment is continued by mouth. There is an average drop of from 20 to 25 per cent in the basal metabolic rate and the corresponding general improvement is remarkable and almost unbelievable. As a rule seven to ten days are required to produce the desired effect; at times two to three weeks are necessary. Surgery should be done when no further improvement follows. It is advisable that the dosage be doubled on the day before, the day of and the day after operation (Boothby). Lugol's solution is recommended to prevent post-operative hyperthyroidism and consequently should always be given after operation as well.

Preoperative management calls for rest in bed, ice bag to heart and a large caloric diet, on account of the excessive metabolism, also saturation with fluids—2500 to 3000 c.c. daily. Digitalization is not advisable in hyperthyroid cases with normal rhythm; it is however imperative as a preliminary procedure in auricular fibrillation. The method of "stealing the thyroid" advocated by Crile is not necessary in my experience in dealing with all types of toxic goitres.

Lugol's solution has been recommended in the medical treatment of exophthalmic goitre cases and V-XVm. are given daily with reduction in dosage as symptoms decrease, and patients sent home from the hospital on a 3-5m. dosage. Whether or not this procedure is to be commended is very questionable and long experience only will decide.

X-ray and radium in the treatment of exophthalmic goitre is unnecessary in by far the majority of cases. The danger of burns, skin telangiectasia, production of exacerbations of symptoms, after irradiation production of myxodema from destruction of the gland, and the difficulty in surgical removal if this proves necessary later, makes this method of treatment inadvisable. Much has been written recently but unless the technique becomes more perfected or the results more uniform and encouraging, surgery still remains the treatment of choice.

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THE THYROID: SURGICAL CONSIDERATIONS*

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In taking up the surgical considerations of the thyroid I wish first to make it plain that I do not consider all diseases of the thyroid as surgical, in fact I find myself in almost complete agreement with Dr. Senty in his review of the thyroid from the medical viewpoint.

I would divide the diseases of the thyroid into two great classes in relation to non-surgical treatment or surgical treatment:

1. *Non-Surgical Cases.*

(a) Under this head I would place first the ordinary goitres of adolescence which never are surgical, and also other colloid goitres which are not producing obstruction.

(b) In the class of non-surgical goitres I would place the small adenomas that are not growing and that are not producing toxic symptoms. I do not feel even as much disposed as does Dr. Senty to advise operation in ordinary adenomas; that is, where there is a single adenoma which is not growing, which has been present possibly for a long while, and which is not producing any toxic symptoms, because I feel that, after all, the percentage of cases of adenoma that develop malignancy is relatively small, I believe certainly not more than one per cent, and that, while quite a good many of them develop toxic symptoms later, perhaps after years, if the patient is warned about that possibility the case

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can be seen soon after the development of toxic symptoms, which as a rule come on very slowly, and operation carry with it very little greater risk than if it is done as a routine in all cases of adenoma.

(c) Also among the cases of goitre which I do not consider to be necessarily surgical are exophthalmic goitres, which, if given a chance, will sometimes respond well to medical treatment. In other words, I believe that an exophthalmic goitre should as a rule first be placed under competent medical management. But it is very important here to warn against the undue prolongation of medical treatment. I feel that a great deal of harm has been done with medical treatment in exophthalmic goitre due to the fact that one is satisfied with results which have not been good enough to warrant a continuation of the medical treatment. In other words, with rest in bed and appropriate therapy the patient improves very decidedly, but is still badly handicapped. The tachycardia is less, but there is tachycardia. The patient is finally allowed to get out of bed, the medical treatment is not so rigid, and that patient in a month or so slumps and is soon back almost to the condition where medical treatment was first started. He is again put under medical treatment, there is improvement but not great, and this process may be carried on until finally the patient has gone on for a year or two with exophthalmic goitre which was somewhat under control, but not enough under control to avoid deterioration in that patient. Thus the patient becomes a poor risk, develops a crippling of the heart with myocardial changes, and never is as good a risk as he would have been if, after the first trial of medical treatment had determined that this was one of the patients that would not respond sufficiently to it, he had then become a surgical case.

(d) Then again, in the class of non-surgical cases we must include those patients either with exophthalmic goitre or toxic goitre who are too ill to stand any surgery, at least for the time being.

2. *Surgical Cases.* Among the goitres for surgical treatment I would include:

(a) Malignant tumors of the thyroid, and also some inflammatory conditions such as tuberculosis of the thyroid; warning here, however, that when dealing with an ordinary inflammatory condition of the thyroid, as the ordinary thyroiditis or strumitis subacute or chronic, we must be careful about how much of the gland we remove because it is in these cases that myxedema is likely to follow, the inflammatory process in the gland having destroyed its function sufficiently to make it necessary to retain more gland than we would do in the ordinary goitre case.

(b) Colloid goitres which are producing obstruction or pressure.

(c) Under surgical cases I would include also adenomas that are growing or are large enough to produce obstructive symptoms or are so located as to produce obstructive symptoms.

(d) All toxic adenomas without exception except in those patients who are too ill to stand an operation.

(e) Exophthalmic goitres which do not respond satisfactorily to medical treatment or which recur after medical management.

In general, the results of surgical procedure in the case of goitre have improved considerably in the last few years. There are several reasons for this improvement. Among these reasons I would mention first that a better observation is made of the patients, with better choosing of the proper time for operation, this applying of course to exophthalmic goitre in particular. I think we are beginning to realize more and more that exophthalmic goitre has its definite periods of exacerbation and remission; that we should never, if it can at all be avoided, operate on a patient during an acute stage or during the height of an exacerbation even if it is not a very acute exacerbation; or operate on a patient while the symptoms are increasing, but rather choose to operate when the symptoms are in the decline, and, of course, preferably when they are at their lowest level. I think it is very important to realize that and to watch the patient carefully until you can be quite certain the proper time has come for operation—during the decline.

There is another point which I think is not often emphasized as it should be. If upon going back in the history you find that the patient has at any time immediately following the inception of the disease or at some time during its course, had an unusually severe hyperthyroidism then be on your guard and insist upon that patient showing less evidence of hyperthyroidism at the time of operation than you would in the average case, because I believe that a gland that has at some time shown a very unusual degree of exophthalmic goitre is more likely after operation to develop an acute hyperthyroidism than another gland which has ever been very acutely toxic.

Next to choosing the time for operation in the bettering of our results in the last few years, I would mention that more of the gland is being removed at operation, now speaking of both toxic adenomas and exophthalmic goitres. We now realize, of course, that all that is necessary to leave is a very small section of the posterior bor-

der of the lobes. In other words the term subtotal thyroidectomy is now applied to the operation for exophthalmic goitre, which removes enough of the gland, not removing a part of one lobe and the isthmus or half and the isthmus, but doing a subtotal thyroidectomy, leaving just enough of the gland so that we will not have myxedema. To prevent the development of myxedema in the average case requires the leaving of only a small portion of the gland with the exception of cases of thyroiditis.

The next improvement in results is partially due to the development of the test for the basal metabolic rate. Of course, like every other laboratory test the metabolic test has to be taken in conjunction with other findings. I will not now speak of its importance from a diagnostic standpoint, but rather from the surgical standpoint; that is, the idea it gives us of the severity of the condition. Taken with other symptoms, it is of great importance. In other words, we have quite often been led to postpone operation in exophthalmic goitre in the case of a patient who is apparently on the decline as far as symptoms go, but whose basal metabolic rate was unusually high, that is, higher than you would gather from the balance of the patient's symptoms. We have never regretted doing that. On the other hand, I have one case to regret where the basal metabolic rate was considerably higher than would be indicated by the other symptoms of the patient, and in that case I felt quite certain that the rate was not a proper index of the condition of the patient. I therefore operated, doing only a ligation, and the patient died within sixteen hours. It was the worst case of acute hyperthyroidism following operation I had ever seen, and the only warning we had was the very high metabolic rate, which, I am sorry to say, I did not properly appreciate at that time. That was some time ago.

Among the causes which have led to improvement in results is the fact that in bad cases we divide the operation into several stages where possible. Preliminary ligation serves us in two ways: First, if we are in doubt as to just how much operation the patient will stand, primary ligation may serve as a test. Ligate one pole, and if the patient comes through that without severe reaction, that can be taken as a fairly good indication that the patient may stand removal of part of the lobe. Second, in other cases where in the beginning the conditions are bad for a thyroidectomy, we may by ligation of one pole followed by another, finally get that patient in condition where removal of part of the gland may be done.

Next, and I think by all odds the most important cause of the improvement in the results of surgery for exophthalmic goitre, has been the use of iodine. There are still men, and men of great prominence, who are opposed to the use of iodine in exophthalmic goitre. Crile, for instance, is opposed to it. It is, of course, pretty hard to combat Crile, still I feel certain that Crile has not used it enough for the reason that in the beginning he was prejudiced against it and therefore has not given it a fair trial. I feel that I am in entire agreement with Dr. Senty as to the great value of the use of iodine in preparing for operation the patient with exophthalmic goitre. And I think it is in those cases in which medical management is decided upon, rather than operation, that the use of iodine is a very important part of the medical management. I will not repeat the method of administration, because I have adopted the same method as that advocated by Dr. Senty. I should say, however, that in some cases I think a dram a day is not excessive where you have a patient with a very acute condition of exophthalmic goitre. Iodine does not have this very great value in all cases of exophthalmic goitre. That goes without saying. Those of us who are familiar with this disease know that it has varying aspects, that it is not always the same, that it is not always due to just a hyperplasia of the thyroid gland; therefore we must expect that in some cases it will fail us. In my experience I would say that in between 75 and 80 per cent of the exophthalmic goitre cases in which I have used iodine in preparation of the patient for operation, I have been satisfied with the result; that is, I have felt that it was a great aid in preparing the patient.

That brings up another question: Should we ever use iodine in cases where the diagnosis seems to be toxic adenoma of the thyroid instead of exophthalmic goitre? Dr. Senty said the results of operation in toxic adenoma were the best of all. That is true, but the mortality is higher in these cases than in exophthalmic goitre operations. And the reason is that we are not able to prepare our patients with toxic adenoma so well. Another factor is that in toxic cases we have the changes in the heart, liver, etc., making these patients poor risks. In addition, we cannot gain anything by preliminary ligation. I believe that in some of these cases, if the diagnosis is at all in doubt, much can be gained by giving iodine. Dr. Senty, of course, realizes the great harm that ordinarily comes from using iodine in toxic adenoma cases, but I feel that if you have the patient in bed and watched carefully, using the iodine only a few days, long enough to find that you are not getting a good result, you are not likely to do your patient much harm. There are varying

factors that render this diagnosis difficult at times. For instance, cases in which there are multiple adenomas and where the surrounding gland contains hyperplasia; in other words, the patient's toxic symptoms are coming from a hyperplasia of the gland surrounding the adenoma. If in that case you try iodine, you get just as good results from it, as though it were a straight case of exophthalmic goitre.

Next, cases in which there are toxic adenomas plus hyperplasia: Under the microscope we are finding in goitres that have been removed, areas of adenomas that are probably toxic, and in between them the hyperplastic gland.

Then again, in cases of exophthalmic goitre where the hyperplasia in the gland is nodular and firm and on examination the gland feels altogether like one in which are multiple small adenomas. The patient may be very sick, and you may never get that patient around to the point where it would be safe to operate, whereas it may not be a case of toxic adenoma at all, but one with a nodular hyperplasia which feels like multiple toxic adenomas, and in that case iodine may do much towards preparing the patient for operation.

THE THYROID: RADIATION CONSIDERATIONS*

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Any discussion of the treatment of hyperthyroidism which takes into consideration any single method of treatment fails to furnish the necessary statistics to justify any one method as obtaining the best results. One cannot choose from the numerous methods now in vogue for the treatment of this condition, unless a study is made of all the methods; and results cannot be obtained unless the individual case is studied and the choice of treatment selected for each particular patient. A brief survey of the numerous forms of treatment, from the so-called scientific neglect, rest, medication, irradiation and surgery will readily convince one that the treatment of hyperthyroidism is today rather unsatisfactory.

In studying the statistics of the different forms of treatment the results are about equal. It is recognized that hyperthyroidism is the result of two definite anatomical changes, that is, a hyperfunctioning of the cells of the parenchyma of the gland, and from adenoma, in which the cells take on the function of the thyroid and produce hyperthyroidism. In either case the hyperfunctioning gland secretes thyrotoxin and any form of treatment is directed toward the reduction of the secretion. Due to the lessening of activity caused by x-ray or radium these agents have come into use. The effects of x-ray and radium are identical. The results and statistics mentioned will be those following x-ray treatments.

X-ray treatment for hyperthyroidism is a recent method compared to surgery and medication and statistics covering a long period of time are not available, but results reported from different clinics and individuals compare favorably with other forms of treatment with the advantage over surgery of having no mortality as the result of treatment. Only recently reports are available from Hyman and Kessell of New York, with good results from what they term scientific neglect with 83 per cent economic restoration, 14 per cent recurrence and 4 per cent failures.

A further study of available statistics coming from the leading surgical clinics would indicate that there are approximately 75 per cent of the cases that are operated upon, including toxic adenoma, that are considered cured, the mortality varying from 1.5 per cent to 3.5 per cent.

The statistics available from medical treatment, including rest and the administration of iodine, show practically the same percentage of cures or economic restoration.

Reports from Means and Holmes of Massachusetts General Hospital, covering x-ray treatment, show 76 per cent economic restoration with 10 per cent recurrence and no mortality.

Crile's report of 600 cases is extremely interesting. These patients were treated surgically, with a mortality of 2 per cent and 100 per cent cured, providing the patient was relieved of all infection, overwork, care and all other conditions which might unfavorably influence recovery.

The article by Christie, "Roentgen-Ray Treatment of Hyperthyroidism", appearing in the Journal of the American Medical Association of November 24, 1924, is complete and liberal and contains interesting statistics from which I quote the following:

> In a previous paper, we made the following statement with regard to our own experience: "We have treated 114 cases of hyperthyroidism and sufficient time has elapsed to state that thirty-two of these patients are cured, as indicated by their clinical condition and continued normal basal metabolic rate. Three patients have died; one of influenza, one of pulmonary tuberculosis and one of hyperthyroidism. Four patients have been operated upon after roentgen-ray treatment, but in only one of these was the roentgen-ray treatment given sufficient trial. Six of our patients had had previous lobectomies or thyroidectomies." We are now able to state that

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fifty-eight patients of the 114 cases previously reported are cured, and twenty-three patients show such definite improvement that they will probably all be placed in the cured list eventually. Six of these patients have died, but death is attributable to the results of hyperthyroidism in only one patient, an inoperable case, who died after only one roentgen-ray treatment had been given.

We look on these results as very satisfactory, especially when we consider that many of the cases submitted to roentgen-ray treatment are of very severe type with a basal metabolic rate above plus 100 per cent, and that some of them are quite inoperable because of their extreme toxic condition, or the presence of some concurrent disease and that others are operative failures.

A study of the results of roentgen-ray treatment of hyperthyroidism in individual cases and by means of the incomplete statistics so far available indicates that this method will probably furnish about the same percentage of permanent cures of exophthalmic goitre as surgical treatment in the best hands.

Under almost any treatment a certain percentage of patients suffering from hyperthyroidism will show definite improvement, a certain number will die and a certain number will still have the symptoms of the disease after sub-total thyroidectomy or any treatment, and will continue to have definite cycles with raising and lowering of the basal metabolic rate.

The toxic adenomata are best treated by operation. Surgery has the advantage of removing the tumor and the operative mortality is low in this class of case, providing there is no marked cardiovascular disease which renders them inoperable.

The cause of hyperthyroidism with its nervous manifestations and palpitation is not definitely understood, and whether the palpitation and tachycardia are the result of the absorption of toxins, or the change in the nervous system, remains to be solved. Anyone seeing any great number of these cases will appreciate the difficulty in handling them and directing a definite form of treatment. This is especially true in x-ray treatment.

One objection offered to x-ray treatment is that there are no statistical records of cure.

Another objection is the difficulty of satisfying the patient and friends during the period of time necessary to administer sufficient x-ray to cause a diminution in the activity of the gland. This lapse of time is considered objectionable, because of the serious damage, such as cardiovascular changes, that may take place.

A third objection is that x-ray causes adhesions and renders operation difficult.

The fourth objection is that the function of the gland may be so reduced as to cause hypothyroidism.

These objections can best be answered by quoting from an article by Christie, Merritt and Groover, appearing in the American Journal of Roentgenology, May, 1923:

The first reason given that roentgen therapy has not yet been proven of permanent curative value should be examined in the light of the fact that the roentgen-ray treatment of hyperthyroidism is still in its infancy. It has been only since the advent of the Coolidge tube that we have been able to control dosage, and only since 1915 that there has been any uniformity in the method of treatment employed. Surgeons have been operating upon patients with hyperthyroidism for more than forty years and have been able to amass a great volume of statistics which prove the value of surgical treatment. The roentgen method is now somewhat in the situation of surgery between 1900 and 1905, when the so-called medical treatment was that usually employed: the burden of proof at that time rested upon the surgeon. Roentgenologists are only now becoming able to point to permanently cured cases of hyperthyroidism, and cannot yet speak in terms of definite percentages, because sufficient time has not elapsed. In the very nature of the case it is still impossible to offer definite proof of the percentage of patients that are cured by roentgen treatment, but many cured cases are now being reported. There is no doubt that the results already obtained justify the extended use of this method and it seems certain that the results will be greatly improved as roentgenologists gain experience in management of this disease and as more accurate dosage becomes possible by improvement in apparatus and technique.

That neither the surgical nor the roentgen-ray treatment of hyperthyroidism is perfect in its results may be inferred from the following quotations. The first is taken from Crile's, "The Thyroid Gland", and the second from an article by H. M. Jones. Crile says: "It is significant to note that many cases that come to operation have had x-ray treatment." Jones says: "It is significant to note that many patients who come in for x-ray treatment have previously been operated upon."

The danger that the hyperthyroidism will increase and produce further damage while the roentgen treatment is being carried out is probably not great. In practically all the cases that are affected favorably by the roentgen rays the symptoms will begin to abate after a month, that is, after the second treatment. Our experience indicates that five or six treatments is about the average number required. The first four are given three weeks apart and the next two at intervals of one month. The total time of treatment is thus less than four months. After the fourth treatment it is an almost invariable rule that the basal metabolic rate decreases steadily, the weight increases and the entire clinical picture is one of rapid improvement. In the rare case that does not follow this course, we have found it of

little or no value to proceed with the treatment after the sixth application. These patients are kept under observation for about three months if the basal metabolic rate is not excessive and the general symptoms not severe. Great improvement may take place during this time and the condition may be such at the end of the period that a cure may be hoped for by further roentgen treatment. There remains, however, the occasional patient who shows little or no tendency to improve after the fourth treatment and it seems to us much the better course with such cases to advise thyroidectomy rather than to proceed further with the roentgen treatment.

If this course is followed, there will probably never be any basis in fact for the surgeon's third objection, that difficulty of operation is increased by roentgen therapy. There is abundance of testimony by surgeons that operation upon the thyroid gland is rendered less difficult by previous roentgen therapy because of the reduced vascularity. It is safe to say that such would always be the case if the roentgen treatment were kept within the bounds indicated above, and beyond which there is probably nothing to be gained.

The fourth objection to roentgen therapy—that it is likely to produce hypothyroidism—can be dismissed as of no practical importance. If this were a real danger, it would constitute a strong argument for the efficacy of the roentgen rays in reducing thyroid activity. If it ever was a danger of any moment, it can be avoided almost with certainty by controlling the treatment with the basal metabolic rate. There is certainly no more danger of this accident after roentgen therapy than there is after thyroidectomy done by the average surgeon.

The writer is of the opinion that the patient presenting mild symptoms due to hyperthyroidism with a basal metabolic rate of not over 35 is greatly benefited by x-ray treatment. In the extremely acute toxic and fulminating type something more radical should be undertaken. After a short period of rest and iodine treatment some form of surgery, probably a ligation with a subtotal thyroidectomy subsequently.

Many patients should receive x-ray treatment first and be operated upon only if the treatment fails, because there is a definite number who will be absolutely cured and in addition there is no mortality connected with the treatment. The time necessary for the trial is well worth the effort, and no more serious damage is to be expected from the delay than from the delay caused by the rest or medical treatment.

Treatment is directed over both sides of the thyroid gland and over the thymus as Ewing states in his book, "Neoplastic Diseases", that most cases of hyperthyroidism are associated with the enlargement of the thymus. The larynx is protected to prevent changes in the cricoid cartilage and to prevent disturbance in speech.

130 kilovolts, 5 milliamperes, 5 millimeter aluminum and sole leather filter, 10 inch distance, 7 minutes on each of the three areas are given at intervals of three weeks.

The number of treatments given is determined by the basal metabolic rate, the rate is taken three weeks after the first treatment and if the rate shows a decided reduction, the intervals of treatment is increased after the third treatment. Following x-ray treatment, the patient has a lessening of the nervous symptoms with an increase in the body weight. There is a steady decline in the pulse rate as well as the basal metabolic rate. If no improvement is noted after the first three treatments with no decline in the basal metabolic and pulse rate, treatment should be discontinued. Some patients will state that they feel much improved in reference to their nervous symptoms after two or three treatments and in these cases, even though there is no great reduction in the basal metabolic rate, steady improvement is noted with regard to relief of symptoms after treatments are discontinued. As a rule five to seven treatments are given, varying in intervals, as stated above, before complete recovery.

Discussion of Symposium on The Thyroid, Drs. Senty, Rowan and Burcham

Dr. Walter L. Bierring, Des Moines—It is always difficult to present within the limited period of time, a comprehensive viewpoint of a subject such as the goitre problem, yet you must admit that Dr. Senty has done exceedingly well. The historical review was interesting as well as the incidence of simple or colloid goitre. It is particularly interesting that there is a county in Michigan where goitre is endemic to the extent as in Switzerland and other countries specially noted for the incidence of goitre. We are all in agreement on the necessity of stressing the preventive measures to be employed in combating the development of simple or colloid goitres, and are also in fullest accord with the essayist's warning against the widespread use of iodine because of the danger of stirring up a latent adenoma to become toxic. Dr. Senty has directed attention to the more recent contributions to the knowledge of the goitre problem. The reduction in surgical mortality is explained by two principal reasons. The first is the continued use of iodine immediately following the operation and for a period afterward. The postoperative shock or toxemia adds to the gravity of the situation by lowering the resistance produced in the system by the continuous stimulation with iodine. By giving large doses of Lugol's solution of iodine—often as much as 100 minims twenty-four hours after the operation—a fatal termination is averted. The second important factor is the discontinuance of the use of digitalis in all goitre cases, except where it is indicated for auricular fibrillation or other forms of

heart failure. It has become recognized that digitalis produces pharmacologic or toxic effects on the central nervous system, manifested by delirium and convulsions, and the addition of this cumulative action to the thyroid toxemia, may further account for deaths occurring within twenty-four to forty-eight hours after operation. Dr. Plummer at the Mayo Clinic has given up the use of digitalis entirely, except for heart failure, during the past year, and feels that it has had a distinct influence in lowering the mortality rate. Another interesting fact is that there are evidently several products of thyroid, and thyroxin is not the only product of thyroid secretion. The thyroid extract prepared by pharmaceutical chemists is apparently as effective in myxedema as thyroxin. Dr. Plummer differentiates the two types into normal and abnormal products. Exophthalmos, the indeterminate nervous movements, and to some extent the tremor, are due to the abnormal products which are particularly responsive to the use of iodine. The symptoms will disappear under the use of iodine, but the other signs or hyperthyroidism will remain. Several cases have been reported of exophthalmic goitre without an increase in the metabolic rate, which suggests the action of a product other than thyroxin. It is reasonable to assume that the difference in the results of treatment by iodine and various surgical procedures may be due to the fact that there are several products concerned, which vary in their expression and react differently to the various forms of treatment.

Dr. Donald Macrae, Jr., Council Bluffs—It seems difficult to think of anything one can discuss after the presentation of these splendid papers. I feel I am sitting at the feet of the masters, not only as regards the papers presented today, but the one read yesterday by Dr. Harkin, which is one of the best I have ever heard on the subject. In the first place I feel that we have had a call-down on both sides, the surgical and the medical. The fact that we have been called down on the question of doing too much surgery is a good thing, and the same in regard to the too free use of iodine. In the case of an adenoma that may and probably will be a serious thing some day, it is better to get it out before the fire starts, as the operation of thyroidectomy is very simple. There should be no more mortality from this operation than from a simple appendectomy. I believe there are just two classes of goitre: One is surgical and the other is non-surgical, and the non-surgical goitre is in young people between ten and twenty-five years of age. A conspicuous goitre in an individual past twenty-five should be removed, because frequently we see these cases coming on later in life, very often overlooked and coming to us too late, with all these cardiovascular changes making it impossible for us to overcome the damage that has been done by the goitre. I believe, too, that our statistics are rather misleading. We should take into consideration the personal equation of the operator and the technic used. I am satisfied, and have been for a long time, that practically all the gland should be removed, leaving very, very little of it. Most men are leaving a large amount of thyroid gland. We now have in the hospital a case of exophthalmic goitre under the care of Dr. Treynor in which the gland was removed ten years ago at Rochester. Today there is a mass on the other side which should be removed soon. I never was in favor of tying off the arteries. I can always do a thyroidectomy in the same time and get by better. Another thing, we used to be told the theory of the parathyroids, and I think that is why we have left so much gland. Has any man ever seen a parathyroid while he was operating? I never saw one and do not know what they look like. It is on the back part some place, therefore we leave the posterior portion of the gland, with the result that we leave about half the gland on each side. I never saw any damage done by leaving only a very little. In patients past twenty-five I believe surgery should be carried out in thyroid cases. In cases of carcinoma, I believe it is proven that only about seven per cent are detected after removal of the gland. Therefore in cases of adenoma or colloid goitre in people past thirty, by removing the gland we are also removing another danger, the possibility of carcinoma. Then, too, the cosmetic effect is something to consider after that age. These patients are usually women and the growth is very objectionable to them and makes them unhappy, and I see no reason why this objectionable feature should not be removed. In my opinion, the operation should be done as much as possible under the local anesthetic method. Local anesthesia plus a little gas will do in all cases except exophthalmic goitre, these patients being extremely nervous, and I still believe in carrying out Dr. Crile's method. We now make a practice of taking them to the operating table and having a mask placed over the face with a little alcohol perhaps and a little ether, telling the patient she is having a treatment, and after a few weeks the symptoms disappear to such an extent that she thinks she is cured. Then some member of the family is told of the operation that is to take place, the patient is "sneaked" up to the operating room and wakes up down stairs with the goitre out. I see no reason why we should split hairs here as to whether we should or should not operate, when in all cases there is a serious possibility of hyperthyroidism or adenoma with development of toxic goitre.

Dr. William W. Bowen, Fort Dodge—I have heard a good many discussions and papers on thyroid disease, but never any as harmonious as this one until Macrae got up here and walked around among the china. I am afraid that if we follow Dr. Macrae's teaching and operate all the goitres that he says should be operated, the thing would be overdone just as are tonsil operations. It seems that the pathology of this disease is pretty well understood by us all, and the speakers have today pretty well agreed on this point. My portion of the discussion really pertains only to x-ray treatment. As Dr. Burcham has

said, there are only two kinds of hyperthyroid goitres, the toxic adenoma and the hyperthyroidism of Graves' disease or Basedow's disease. Dr. Burcham as well as the other speakers have told us that the case of adenoma should be operated and that it should not be x-rayed and should not have iodine. All are agreed to that. Dr. Senty thinks all simple adenomata should be operated, Dr. Rowan thinks not. I believe Dr. Rowan is right about it for the reason I have given. Exophthalmic goitre is very amenable to x-ray treatment. No one claims that x-ray will cure all these cases, no one claims that anything will cure all of them. But Dr. Burcham has shown that he has been having the same percentage of cures, or apparent cures, from the use of radiation, that the surgeon has from surgical procedures. Radiation has several advantages. The patient will submit to radiation months and months before she will submit to operative treatment. That is certainly an advantage. Another thing: The radiation treatment does not get a fair show in one way, and that is that a patient who is too sick to be operated on is referred over to the radiologist for treatment, and even in those cases he gets a decided benefit. And often, though Dr. Burcham did not mention it, he gets them in condition so that they may later be operated. I want to say just one word that does not come under radiation treatment at all. While Dr. Macrae distinctly opposed the practice, in Iowa and other places operation is being done on the adolescent goitre. There isn't anything worse that you can do to your patient than to operate on an adolescent goitre.

Dr. D. J. Glomset, Des Moines—I arise to take up the very unpopular side of this question and start the fight, if one may put it that way. In considering the excellent papers that have been so ably presented here, one would believe that this whole problem is settled. But I fear that it is not. I became interested in the results of the treatment of hyperthyroidism about a year or so ago, and my interest was aroused because of the fact that I saw a patient operted on by Pemberton in which the subtotal thyroidectomy was done with an acute exacerbation of the symptoms, and another one operated on by Crile, who obtains 100 per cent cures, developing a myxedema; that is, the basal metabolic rate was 30 per cent minus that of the normal. I then began to look into the problem and the results obtained by the various treatments. Let me say right here that I have no ax to grind, I don't care what particular treatment is employed in a certain case as long as the patient gets well, and gets well faster than by any other form of treatment. Looking into the reports of the results which briefly I will review, there are at least thirty different forms of treatment of hyperthyroidism. Goat's serum cures 80 per cent of the cases, pituitary extract also about 80 per cent; corpus luteum also about 80 per cent; Beebes serum about 80 per cent; surgery also about 80 per cent; radium also 80 per cent, and x-ray also about 80 per cent. Now, there is something wrong in the state of affairs right here. Either the surgeons are liars, the radiologists are liars, or the medical men are liars, or the condition corrects itself regardless of what treatment is employed. The only available reliable statistics that I can find as to the after-results of the treatment of hyperthyroidism are from the Mayo Clinic and from Boston. In Pemberton's series he reports somewhere about 80 per cent cures, but he qualifies this report by stating that even after subtotal thyroidectomy approximately 40 per cent of these patients have recurrences. Why? Then the same thing occurs following x-ray and radium treatment. What is wrong here? I am afraid that the reason for all of these wonderful reports made by the different men is the fact that we have not yet determined the natural course of this disease. The only persons who have tried to do that legitimately, at least it seems so to me, are Herman and Kessel in New York. These observers have followed fifty-two consecutive cases of hyperthyroidism for over two years, and they have taken them absolutely as they came, which the other people have not done, and they report that the natural tendency of this disease is to recovery. They report also 80 per cent recoveries, with scientific neglect. The trouble with us in all our therapy, whether it be surgical or medical, is the lack of control. In order to determine the value of any treatment, whether surgical or medical, it is necessary to know the natural course of the disease, and that has not yet been attempted except by Herman and Kessel, and the work they have done is very urgently in need of repetition by others. When we have studied and come to an understanding of the natural course of the disease, then we shall know whether the surgeons, the internists, or the radiologists are right.

Dr. Charles H. Magee, Burlington—The symposium on the subject of the thyroid has certainly been fine. In listening to Dr. Senty, his historical reference, to which Dr. Bierring has alluded, pleased me greatly. Anything that refers to Julius always interests me. I would like to know whether he wrote that himself or if it was by some contemporary historian. Now we come down to the discussers, we will say of Macrae that once in awhile he absolutely stumbles onto something that is so. It may be accidental, I don't know. But, speaking of the parathyroid, I never saw but one; I have been looking diligently on every cadaver that I have gone over for ten years, and I have seen just one. Let me relate a circumstance, it comes in the literature from the late John B. Murphy. I have the report of the case in my library, now listen to it. He says, "Now, I am demonstrating this case of goitre, I come to this, and I come to that, and here I came to a parathyroid". Good for the eyesight of John B. Murphy! However, he operates on Father Vincient of Burlington and clamps the recurrent laryngeal nerve, almost destroying his voice. He sees the parathyroid, but fails to discover the recurrent laryngeal, or in other words, he sees the mote but fails to discover the beam.

Dr. Lloyd T. Reid, Gravity—I would like to know how many doctors whom we call country practitioners are in this hall; will you please stand up? (A large percentage of the members arose.) We come here and listen to these papers and they are fine, but I want to tell you that with us fellows who are practicing in the country and living in a little town, things are different. I am located in a town of 300, I am from the sticks. And that is where we are up against it. You men in the city, with everything at your command for the making of a diagnosis, can arrive at your conclusions, and then you get up here and tell us about it. But we who are located in a little country town cannot take our x-ray with us, we cannot take the necessary equipment with us, and you ought to feel sorry for us. But we come here and some one says to remove all tonsils, some one else says not to do so. One man has said here that when we have a goitre to remove it, another has said that we should not remove it. What in the devil are we going to do when we are depending on you to lead us? It is, I believe, a case of the blind leading the blind. One man tells us to use iodine. We have used it—I guess we are taught by the traveling men to do this, I don't know who else, and we use it. He comes along and tells us, you use creosote in tuberculosis; well, we use it. But I want to tell you that the man who makes an early diagnosis of anything is the one who is going to be successful. We fellows in the country have to depend on our own resources. When we refer a case the specialist refers him to another specialist, this man refers him to another specialist, and at last the patient comes back and says, they don't know what is the matter with me. Perchance you find out what is the matter with him, and perchance you do not. I am talking here for this reason: We are from the country and have a hard time all the way around collecting our bills, and the only thing we get out of it is cussing.

Dr. Elbert J. Watson, Diagonal—Dr. Reid, representing as I do the syndrome of the country practitioner, reminds me of a young fellow and his sweetheart who were riding in a taxi, when the driver stopped suddenly and turning to the young man inquired, "What do you want"? "Nothing." "Well, pardon me, I thought the young lady said stop." "Well, she did", said the young man, "but she wasn't talking to you!" My idea is that in this excellent symposium the essayists are not talking very much to the country practitioners. The grocer will take care of the iodine, he will sell to the patient the iodine salt; the surgeon will take care of the surgery, the x-ray man and the man with the tube of radium will take care of that part of it. I am surprised that Dr. Reid, who is practicing not far from me, has not learned the secret of "passing the buck". I think we are rather interested in the subject of goitre as it applies to the country practitioner.

Dr. Frank M. Fuller, Keokuk—There seems to me to be a very serious side to this question that has developed here today, and at the bottom of which lies a great deal of the philosophy of the difficulties we have in the practice of medicine. The very fact that we come here, and, in the search for truth, are working along on divergent lines, is one of the best evidences that some day we are going to find the truth. It is the only way by which we will find the truth, but the important fact lies in our actual practical work. Our patients come to us, and with all the sincerity and earnestness and with all the science and all the effort to solve the problem for our patient, we come to a conclusion. Then the patient goes to our brother practitioner for advice, and, with the same earnestness and desire to get at the facts, he also arrives at the truth, but which is diametrically opposite the statement we have made. One says to operate, another not to operate; one says to give iodine, another not to give iodine; and the patient gets that advice. Now, when we are discussing this subject here we understand what the whole thing is about and we know that no harm is done, because men are honestly striving to get at the truth in different ways. But the patient gets the opposite view and says, "Where am I possibly at"? You know that the practical side of the whole thing is that many, many times, either by advice or through the efforts of men who are working along unscientific lines, the patient falls into the hands of the osteopath or the chiropractic, who says, "Why, my dear madam, your whole trouble is in your spine". The patient then goes to another practitioner of the same school, and he says, "Your whole trouble is in your spine", and the third one likewise says that the trouble is in the spine. The natural reaction of the human mind to that sort of uniform statement is that they conclude: This fellow knows what he is talking about. And that is what I mean when I say that there is a philosophy about these divergent views to which we give expression here. That applies to the practical things which we consider. At the coming meeting of the A. M. A. there is to be a great congress on goitre and an afternoon will be spent in trying to settle the question of classification. Here comes out a new classification that is not all iodine; we have a deficiency of sulphur and other salts causing the condition, and so it is the idea of a deficiency goitre we are hearing about now. At Atlantic City the authorities on this subject are going to try to settle upon what shall be considered a logical classification. Not that they will consider all these various points, but,—what is the true classification of goitre? When this question is settled we can then all talk the same language. Also they are going to try to settle some of the problems that are being discussed here today; for instance, what are the treatments for this condition. I did not intend to discuss this subject, but the very things that have come up here today cause us to think very seriously of the philosophy of the situation.

Dr. S. L. Clabaugh, Gravity—I wish to make just one point, and Dr. Fuller came pretty nearly hitting it and I thought he was going to before he got through; and that is, the trouble with the medical profession. We come to the state meetings and discuss these questions, knowing that there is a dif-

ference of opinion, and then we return to our home towns and go to fighting one another. That is the reason the chiropractics and the osteopaths stand together just like a stone wall. If we men who are located in the country will go home and stand together, and if when one of our confreres makes a mistake the other men in the community will keep their mouths shut and cover it up as good as the fellow himself tries to cover it up, the public will have much more respect for us, where now they are prone to think that we are a bunch of thieves.

Dr. Conreid R. Harken, Osceola—In listening to this symposium and the discussion on goitre, I have been impressed by the fact that nothing has as yet been said about the influence and the connection of the nervous system with the glands of internal secretion. We know that the emotions and the impulses all have something to do with these glands. Dr. Macrae has mentioned the fact that he likes to slip up on these cases for operation. There is a reason. He is taking into consideration the autonomic nervous system. Some observer in the physiological field whose name I do not now recall, did actually work out a conection between the anterior horn of the spinal cord and the cervical sympathetics that supply the thyroid gland. Furthermore, he worked out a direct connection between the anterior horn of the spinal cord and the cortex of the adrenal glands. We know that the thyroid is the gland which regulates our every-day metabolism. When the thyroid gland is receiving stimulation from the cervical sympathetics, which it should not receive, the thyroid gland may overwork whether or not there has been a groundwork laid by a lack of iodine. We do know that, by quiet talks in our office, by investigating the environment and family relations, and by eliminating worry and the effects of nervous shocks to which they have been subjected, we can benefit these patients to a degree, or at least we can classify them and determine whether or not the condition of hyperthyroidism is sufficient to produce fatigue, or whether it might be producing degenerations. We are certain that the mental equilibrium of the patient has a great deal to do with the way the case gets along, and if we do not apply those principles before and also after operation we never get good results. Such influence on or control of the patient can best be accomplished by the general practitioner who perhaps is administering to ameliorate some of the symptoms present.

Dr. Senty—I want to make a few remarks to the country practitioners. First, there is no reason that I can see why any country practitioner should not be able to make the diagnosis of hyperthyroidism. There is nothing mysterious about it, it does not require an outfit of expensive apparatus. It requires simply a little time and thought and the careful going over of the patient. Secondly, as an internist I want to go on record at this time as being against medical management of hyperthyroidism. I suggest that you get your goitre cases early, and that is where the practitioner in the country comes in. If you patients come to you, there is no reason why you should not get your exophthalmic goitre cases early, and if you use plenty of Lugol's solution you can get them down where operation will be a comparatively simple procedure. Thirdly, classify your goitres: Colloid, simple or toxic adenoma, and exophthalmic goitre. If you thus classify goitre cases, there will then be no question as to which cases should receive iodine and which cases should not. Use iodine on colloid and exophthalmic goitre cases, and keep away from its use in adenoma. I think that treatment by "scientific neglect", is at this time a dangerous procedure. The goitre problem is a serious one which has not yet been definitely solved. Therefore I fear that the large number of cases that cannot be operated or that have bad results following operation, are due to the fact that they have been practised upon with "scientific neglect".

Dr. Rowan—Briefly replying to Dr. Macrae, I did not wish to be understood as saying that I would not operate in simple cases of adenoma. But in the case of simple small adenoma, not toxic or producing pressure, I do not believe in operation. Many of them are cysts, and there is no likelihood of their ever becoming toxic. This applies as well to many other conditions aside from goitre. With Dr. Glomset's choice of statistics involving only fifty-two cases as the best statistics available, I take issue. The observers mentioned do not include enough cases in a disease which is so varied in its manifestations, which does not have a continuous course, which has remissions and exacerbations and which presents so many different aspects.

Dr. Burcham—This discussion, starting out in a humorous way and taking different angles, is, I believe, a good illustration of the statement made in my paper—that the treatment of hyperthyroidism is rather unsatisfactory and the cause is rather unknown. This is the kind of discussion that is going to lead to constructive work which will culminate in a definite form of treatment. I think the president sounded the right note when he spoke about the American Medical Association getting together in a congress and trying to classify goitre. That classification will have to be something more than that referred to by Dr. Senty. It is necessary to have a classification of hyperthyroidism, for we must apply different kinds of treatment to different groups of hyperthyroidism which present different forms of symptoms. And when we have available statistics giving the results of the different methods of treatment as applied to the various groups of hyperthyroidism, we will then have something that is of value in trying to decide definitely what form of treatment we are going to employ. When Dr. Macrae speaks about "sneaking up on the patient", he is alluding to one of the most potent methods of treating hyperthyroidism, and that is rest. If he would sneak up on his patients long enough he wouldn't need to operate on a lot of them, they would get well themselves without operation. In regard to the statistics which are now available as

to results from different forms of treatment, they are now practically identical, there is apparently no advantage in any of them.

THE MENDELIAN LAW*

W. W. Bowen, M.D., F.A.C.S., Fort Dodge

Gregor Johann Mendel

In 1900 the law of Mendel was rediscovered. At first it appeared to refute and overthrow the idea of evolution, but as it became better understood and its principles thoroughly investigated it is found to confirm evolution, and is the basis of all biologic studies. What the atomic theory is to chemistry, and the theory of gravitation is to astronomy, Mendel's law is to biology.

In 1822 Gregor Johann Mendel was born in Heinzendorf, a small village in Austrian Silicia. He was one of a large family and his father was a peasant, a tenant farmer as we would say in this country, having but recently risen to that station from a peasant laborer. Mendel was not a Jew though the name suggests Jewish origin. There was no public school in Heinzendorf, but Mendel's maternal uncle supported a school there which Mendel attended, and at the age of eleven he was sent to the public school at Leipnic and finished there. The gymnasium in Germany and Austria corresponds to our high school, but is not free. Mendel's father was unable to send him to the gymnasium and do justice to his other children, but a younger sister gave up a part of her dowry that the money might be had. Now a dowry in those European countries means more than it does here, for here a girl can generally find a husband whether she has a dowry or not, but there the dowry is part of it and if a girl has none, she is pretty certain not to find any one to marry her. Mendel took the dowry, but later repaid his sister and educated two of her sons. He went to the gymnasium at Tropou and at Ölmutz, finished there. At Tropou, one of his teachers was an Augustinian Monk who made a great impression on him and when he was through at Ölmutz, he entered the monastery at Brünn, known as Konigklöster, as a novice and at that time assumed the name Gregor. He was then twenty-one and was ordained a priest at the age of twenty-five, and then taught four years in Brünn; then at the age of twenty-nine he was sent by the monastery to Vienna to study natural science to which he had shown great aptitude. He stayed two years and returned to Brünn and taught in the Real schule for fifteen years. Then at the age of forty-six he was made abbot. This elevation came to him against his wishes. He was an enthusiastic scientist and teacher, and even when he was a novice, he commenced his original investigations in botany, and his elevation brought all this to an abrupt close, and henceforth his life was spent in executive duties, not to his liking.

Shortly after Mendel became abbot, the Austrian government made a law taxing monasteries, as they thought, unjustly, and they resisted the law and Mendel led the fight. At first all the

other monasteries supported him, but at the last he stood out alone and even allowed the property of the monastery to be distrained rather than submit. After years the law was repealed, but not until after Mendel had died of chronic nephritis from which he had suffered for years.

If ever a man suffered the troublous vicissitudes of life to the end, it was Mendel. In his young life he was industrious, original, enthusiastic and of a joyous disposition. For twenty-five

*Read before the Mid-Summer Meeting of the Austin Flint-Cedar Valley Medical Society, New Hampton, Iowa, July 7, 8, 1925.

years he spent his spare time in the garden of the cloister studying and raising plants, and eight years were devoted to different varieties of peas, and he kept records of over 8000 plants and from them evolved the principles now known as Mendel's law. He published this in 1865-6, years after the publication of the "Origin of Species" by Darwin, in the transactions of the Historical Society of Brunn, and it fell completely flat. He sent this account to Nageli in Munich, the only great scientist with whom he had direct contact, but Nageli considered it of little moment. He was then forty-three, and after that he published one short article and that was all. Three years later he was made abbot, and shortly afterward the trouble with the government commenced, and he became ill, and troubled and morose, and his naturally joyous disposition changed, and became suspicious and embittered and he died an unrecognized and disappointed man. He never knew that the government finally decided his differences in his favor, and he never knew that eighteen years after his death and thirty-five years after his paper was published, that it was resurrected and has now become the fundamental law of inheritance and the basis of a new science, eugenics.

In 1900 three scientists all working independent of each other, De Vries, a Dutchman; Correns, a German, and Tsermack, an Austrian, all worked out the same principles and dug up Mendel's paper hidden in the dust of the transactions of the Brunn Historical Society and gave his great work to the world.

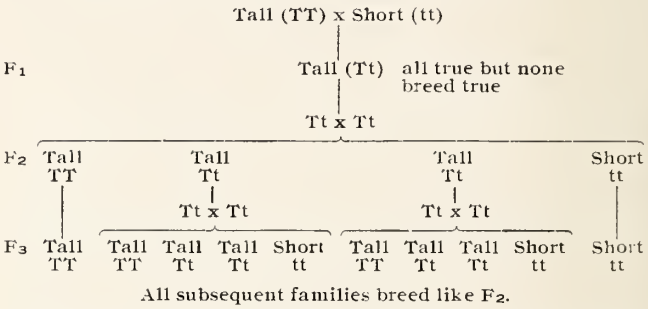
MENDEL'S LAW

Mendel made his experiments with the edible garden pea, not sweet peas as is sometimes stated. He selected seven characters which were easily perceived and crossed them with each other. They were:

1. Difference in the form of the ripe seed.
2. Difference in the color of the seed albumin.
3. Difference in the color of the seed coat.
4. Difference in the form of the ripe pods.
5. Difference in the color of the unripe pods.
6. Difference in the position of the flowers—axillary or terminal.
7. Difference in the length of the stems, the tall were about 6 feet, the short about 18 inches.

Taking the last which illustrates them all, and experiments with the rest all confirm the findings of the last, he found crossing the tall with the short:

1. The first generation all are tall but none breed true, being hybrids.
2. The second generation—all hybrids bred together—gives 3 tall and 1 short, the short breeds true, but only one of the tall breeds true.
3. Shorts bred together always give short.



There are certain terms that must be understood in order to comprehend the Mendelian law:

Dominant, a character that dominates or controls an individual.

Recessive, a character that tends to recede and is overshadowed by the dominant when both are present in an individual.

Heterozygous, containing 2 gametes, one dominant, the other recessive and that does not breed true.

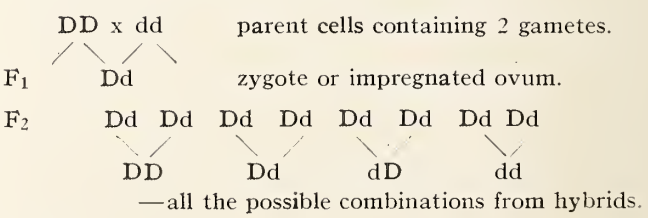
Homozygous, containing 2 gametes, both alike and that does breed true.

Gamete, something inherited from progenitors, each life cell contains 2 gametes, one inherited from the father and one from the mother.

In order to understand the zygous terms it is necessary to have a conception of the zygote. Each life cell, the spermatozoid in the male and the ovum in the female, contains two hereditary elements, one from the father and one from the mother, these are called gametes. Each gamete is either dominant or recessive.

To illustrate this graphically:

Let D represent dominant.
Let d represent recessive.
Then DD will be homozygous and will breed true.
Dd will be heterozygous and will not breed true.
dd will be homozygous and will breed true.



Ratio 1 : 2 : 1.

Now in tall and short peas, tall is dominant to short. Therefore—

Tall is dominant.

TT is dominant also homozygous and breeds true.

tt is recessive and also homozygous and breeds true.

Tt is dominant in appearance but is heterozygous and does not breed true.

Then from the diagram we get—

1. Dominant bred to dominant, all dominant and all breed true.
2. Recessive bred to recessive, all recessive and all breed true.
3. Dominant bred to recessive, all are dominant in appearance, but none breed true.
4. Dominant bred to heterozygous, 2 dominants that breed true, 2 heterozygous, that look dominant.
5. Recessive bred to heterozygous, 2 recessive that breed true, 2 heterozygous that look dominant.

Mendel found that his law applies to peas and assumed that it applied also to other plants as well; De Vries found that it applies to wheat, and others found that it applies to all plants. Prof. Morgan of Columbia University proved that it applies to the banana fly and discovered numerous of its complications, and in working this out, cultivated, recorded and tabulated over 40,000 of these flies. The banana fly lends itself very well to experimentation because it has a number of variations, it is easily kept on a little banana in a milk bottle, and reproduces every nine to eleven days 200 to 300 young.

It is now known that Mendel's law applies to all animals and to the human species, and that every inheritable character follows this law; that it not only controls physical form, color complexion, family peculiarities, like the Hapsburg lip, but mental traits and moral character and family habits are also governed by it. In short it is the basis of eugenics and the basis upon which every breeder must depend to develop his herd, and every horticulturist to develop new flowers and plants. It is the most fundamental thing in biology.

INHERITABLE CHARACTERS

Dominant	Recessive
Normal size of body	True dwarfism
Short fingers & thumbs	Normal length
Brachydactylism	Normal digits
Extra finger (polydactylism)	Normal number
Webbed fingers	Normal fingers
Fragile bones	Normal bones
Double jointedness	Normal joints
Hapsburg lip	Normal lip
Pale thick skin	Dark thin skin
Normal skin pigment	Albino
Spotted white hair	Solid color
Easily blistered skin	Normal skin
Hairy skin	Normal skin
White fore lock	Solid color
Dark brown hair	Light brown hair
Black hair	All other colors
Patchy gray hair	Solid color
Curly hair	Straight hair
Hair on fingers	Absence
Dark eyes	Blue eyes
Hereditary cataract	Normal eyes
Large eye ball	Normal
Normal	Deaf mutism—when not due to disease
Non-musical	Musical
Non-artistic	Artistic
Normal condition	St. Vitus dance
Normal mentality	Dementia precox
Normal condition	Paranoia
Normal condition	Alcolholism
Normal condition	Hysteria
Diabetis	Normal condition
Normal condition	Bronchial asthma

It is not necessary for me to cite the histories of families, large portions of whose members are insane or feebleminded, and of others who are nearly all criminal and others who are hereditary paupers. Every community has them—they are hereditary traits. Cultivation and education seems to benefit them some, but does not eradicate them.

The Cells of the Body

The body of an animal or plant is composed of an innumerable number of cells. The simplest animal or plant is composed of a single cell and that cell contains all the functions of life, digestion, absorption, secretion, excretion, sensation

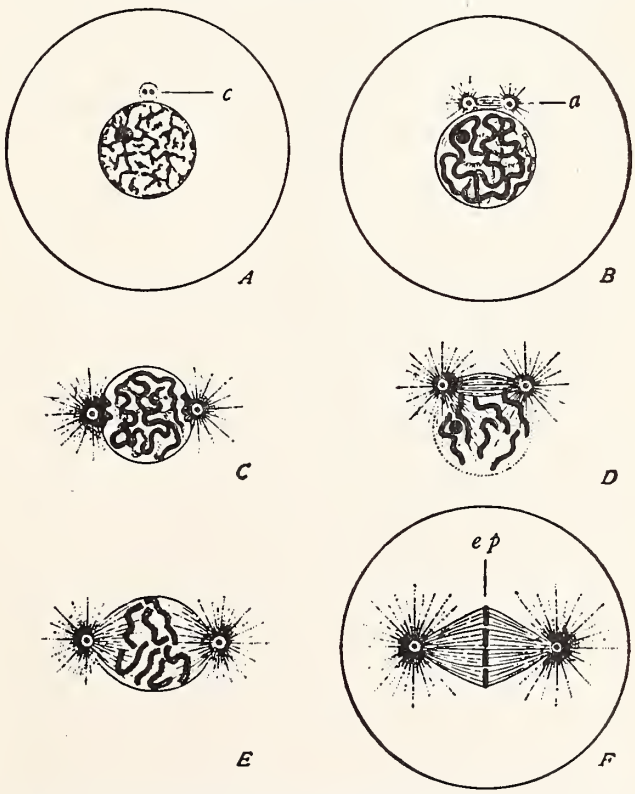


Fig. 12.—Diagram of the prophase of mitosis.
a, achromatic spindle; *c*, centrosome; *e p*, equatorial plate; *A–F*, successive stages of the prophase of mitosis. (After Wilson.)

and reproduction; in the more highly organized plants and animals, the functions of the cells become specialized, thus there are muscle cells for motion, nerve cells for sensation, glandular cells for secretion, etc. All these cells we may call

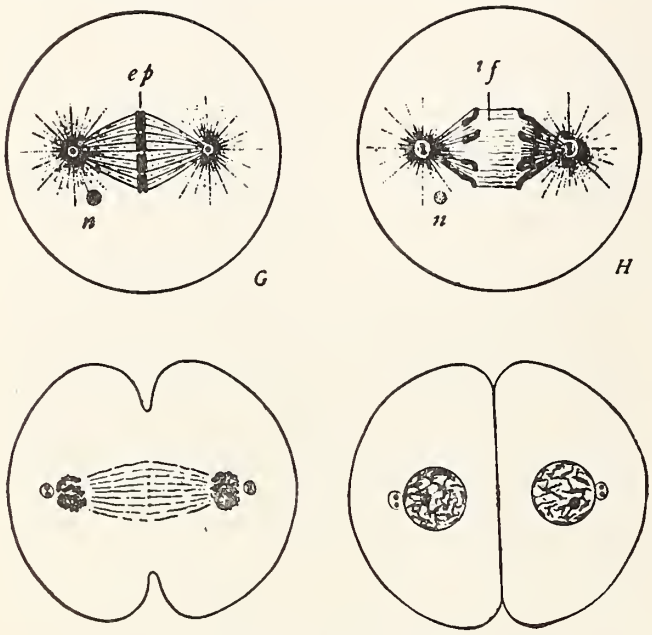


FIG. 13.—METAPHASE AND TELOPHASE OF MITOSIS.
G–H, metaphase; *I–J*, telophase; *e p*, equatorial plate; *i f*, interzonal fibres; *n*, nebenkern. (After Wilson.)

body cells and they have the power to reproduce cells like themselves, but they can not reproduce the individual, for this highly specialized cells are segregated from the body by organs for that very purpose. These are the germ plasm or life cells or reproduction cells, the spermatozoid in the male and the ovum in the female.

CHROMOSOMES

In unicellular organisms, reproduction is by simple division of the cell into two, but in higher organisms, growth is by mitosis and reproduction is by union of the germ cells of two individuals of different sex and then division into body cells.

Mitosis is cell division of a more complicated sort. Each cell contains a nucleus and near the nucleus is a tiny spot called the centrosome. When mitosis begins, the centrosome separates into two and they recede from each other, and as they recede a bundle of fibres appear between them called the achromatic spindle. They finally reach points on opposite sides of the nucleus, and the achromatic spindle broke in two, but in this new position a spindle connects them through the nucleus. As this is going on, the chromosomes have fused into one irregular thread and then divides into the same number of chromosomes that there were before and now they arrange themselves in v-form with the points of the v's toward the center of the nucleus like the spokes of the wheel, with the achromatic spindle as a hub. The chromosomes now split longitudinally and separate from each other so that where there was one wheel, there are now two, and then the whole cell divides between them, and mitosis is complete. This is the process of division in all body cells.

The division of the life cells or sperm cells is slightly different. When the chromosomes form into a simple thread and fills the nucleus as an irregular coil, the thread divides again, but only into half the number of chromosomes there were before, then mitosis proceeds about the same as in the body cells. When the sperm cell unites with its mate, that is, when impregnation occurs, a like number of chromosomes is brought into the new cell from the mate and the number of chromosomes is restored.

There is a definite number of chromosomes in each species, thus man has 24—this is pretty definitely determined though there is some difference in opinion about it, some claim that there are 16. The mouse has 20; the snail, 32; cotton, 28; 4 o'clock, 16; garden peas, 7; night shade, 36; tobacco, 24; wheat, 8.

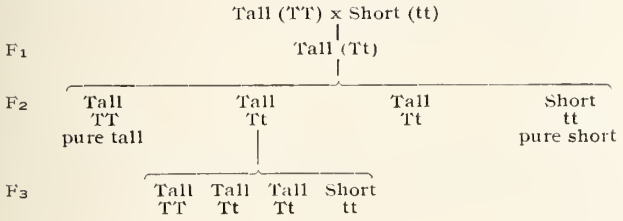
The chromosomes are gene carriers; gene are those properties of cells that permit or cause any inheritable character to pass from parent to offspring, they are also called factors, thus there is a factor for the dark color of the hair, another for the dark skin, another for the color of the eyes, another for tallness, and so forth, one for every inheritable character. Each chromosome contains numerous factors and may be likened to a string of beads—each bead the factor for some character.

The factors for similar characters are located in the same chromosome, and the closer the characters resemble each other, the closer their factors lie together in the chromosome, and are called linked factors. For some characters to show up in the offspring two or more similar factors are required.

When a factor exists in one parent for some character, a similar factor exists in the other parent and they are called allelomorphs of each other, for instance, in the tall pea, there is a factor for tallness, and in the short pea, there is an absence of the factor for tallness or a factor for shortness, and the factor for tallness and shortness are allelomorphs of each other.

When the tall pea is crossed with the short, the germ cell or gamete of the tall contains two elements for tallness which it inherited from its two parents, and the germ cell of the short contains two elements of shortness which it inherited from

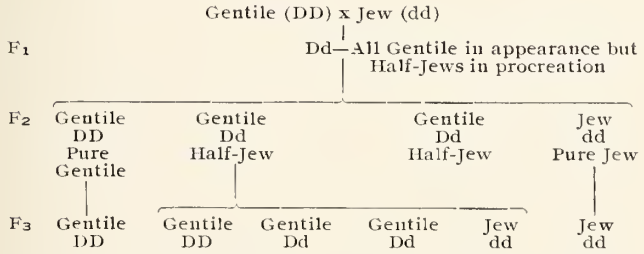
its parents; but when the two gametes unite with each other and form the fertilized ovum or zygote, only one element comes from the tall and one from the short, so the first generation genetically are all hybrids even though they may look tall. In the second generation they separate into pure tall, pure short and heterozygous and this is called segregation.



One of the chromosomes is the sex chromosome and in it linked together are not only the factors that determine the difference in the sex organs, but also the factors that determine the bodily character peculiar to sex, such as size of the body, configuration of the body, the beard, the difference in the larynx and consequent difference in the voice, the difference in the breasts, etc.

Simple Mendelian Law

A Jewish scientist, Salaman, worked out the Mendelian law as related to Jews and non-Jews and found that they cross according to simple Mendelian law, the gentile or non-Jew being dominant and the Jew recessive.



1. Gentile marries a Jew all their children look like gentiles but are half Jew.

2. If a half-Jew marries a half-Jew, 3 children out of four will look like gentiles but only one of the three will be a real gentile and his progeny will be gentiles, the other two will be half Jews; the other one of the four will be a real Jew. Ratio 3 : 1 as to looks. Ratio 2 : 1 as to breeding.

3. If one of these segregated gentiles marries another segregated gentile, all their children will be real gentiles.

4. If one of these segregated Jews marries another segregated Jew all their children will be real Jews.

5. If a gentile marries a half-Jew, all their children will look like gentiles, and two will be real gentiles while the other two will be half-Jews. Ratio 4 : 0 as to looks. Ratio 2 : 2 as to breeding.

6. If a Jew marries a half-Jew, half their children will look like gentiles, but 2 will be half-Jews while the other half will be pure Jews. Ratio 2 : 2 as to looks. Ratio 2 : 2 as to breeding.

While this is the law worked out by Salaman, I am sure it is correct as to breeding, but I believe there will be more variation as to looks than his law shows, because dominance is not always complete, and frequently the ratio of dominance or appearance conforms very closely to the ratio as to breeding. This is true in the dehorning of Hereford cattle.

Dihybridism

Sometimes there are two factors in a chromosome that carry the same character, as for instance color. In those cases to bring out certain features in the offspring, two doses are required. This is beautifully illustrated in the negro.

It is fairly certain that the original man was brown and not yellow, white, black or red and that these colors have been added to him through the ages by mutation.

If a white person is crossed with a negro, all the children are mulattoes—none are white and none are black, but all are brown.

If mulattoes are crossed with each other, the children will be of varying shades of brown, and rarely one will be pure white and equally rarely one will be genuine Ethiopian black.

If the Ethiopian color were a simple Mendelian character, all of the children of negroes crossed with white would be black as black is dominant, but none of them are black. This is because it requires two doses of black to produce the Ethiopian black, therefore a careful study of mulattoes shows that the children of two mulattoes have:

1. One chance in sixteen of being black.
2. One chance in sixteen of being white.
3. One chance in four of being dark brown.
4. One chance in four of being light brown.
5. One chance in six of being mulatto.

This is illustrated in the appended table.

AB	Ab	aB	ab
AB	AB	AB	AB
AB	Ab	aB	ab
Ab	Ab	Ab	Ab
AB	Ab	aB	ab
aB	aB	aB	aB
AB	Ab	aB	ab
ab	ab	ab	ab

These 16 squares represent all the possible combinations of the 2 factors working together. Ratio 1 : 4 : 6 : 4 : 1.

Although one out of sixteen is white, one must not get the impression that he will be a Caucasian, he will not be nor will he even look like one, because there are numerous other characters of the negro race such as kinky hair, thick lips, flat nose, physical contour, flat feet and protruding heels, and all of them are dominant and will show up to be a negro in spite of his color.

COMPOUND CHARACTERS

Cock's Combs

Ordinary barnyard fouls have four types of combs:

1. Single—common to various breed and is always recessive, and is probably the original form of the comb.

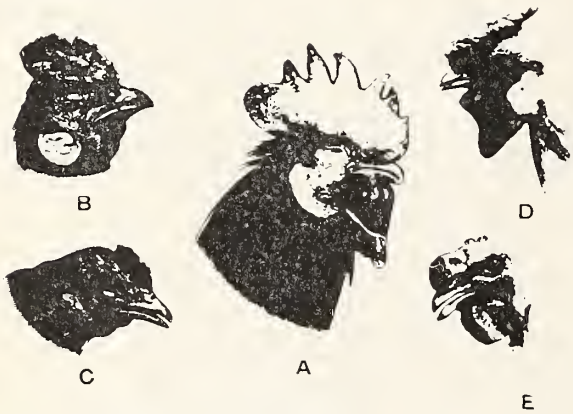


Fig. 12. Various types of combs in Fowls.
A. Single Comb: cock.
B. Pea Comb: cock.
C. Pea Comb: hen.
D. Rose Comb: (Bantam) cock.
E. Walnut comb in a young cock. This is the type in Malays, and can be produced by crossing Rose × Pea.

2. Pea comb – common to various breeds, and dominant to single.
3. Rose comb—common to various breeds, and dominant to single.
4. Walnut comb—found normally only in one breed, the Malay.

In the various crosses peculiar things appear.

Single x pea follows the simple Mendelian law:
F_1 all are pea but do not breed true.
F_2 3 pea : 1 single—ratio 3 : 1 as to looks.
1 : 2 : 1 single as to breeding.

Single x rose also follows the simple Mendelian law:
F_1 all are rose but none breed true.
F_2 3 rose : 1 single as to looks.
1 : 2 : 1 as to breeding.

Rose x pea an entirely unexpected thing happens:
F_1 all are walnut.
F_2 walnut x walnut gives 1 walnut : 1 rose : 1 pea : 1 single.
F_3 these 4 types breed true.

It is probable that the original comb was single, but by mutation the pea appeared, then it became segregated and became the prevailing comb of several breeds.

At another time by mutation, the rose comb appeared and became segregated and is finally the prevailing comb of various breeds.

At another time the rose became crossed with the pea and the walnut, being the heterozygous form of pea and rose, became segregated and eventually the Malay breed was developed with the walnut as its peculiar comb.

SEX

The production of sex follows the Mendelian law, but naturally there is a modification of the usual Mendelian ratios—1 : 2 : 1 as to breeding, and 3 : 1 as to appearance.

It is axiomatic that the offspring of any two parents must not be halfway products but must be either male or female. In bysexual animals hermaphrodites never exist; all so-called hermaphrodites prove on careful investigation to be errors in development like hare lip, usually hypospadias.

The sex factors are carried in the sex chromosome and are different in the two sexes.

The female sperm cell or ovum contains two gametes which it received from its parents.

The male sperm cell or spermatozoid has two gametes for sex which it received from its parents but they are different from the female.

Let the female gametes be represented by xx.
Let the male gametes be represented by xy.
The crosses will be as follows:

XX XY	XX XY	Parent cells.
XX	XY	Zygote.
female	male	

SEX-LINKED CHARACTERS

When a character appears in one sex only, it is said to be sex-linked. There are many such characters. Aside from the difference in from the sex organs, in the human there are the larger body in the male, the beard, the more hairy body, the coarser features, the larger larynx and consequent heavy voice, and many other physical features as well as the different mental traits, and these differences are as marked in all lower species as they are in man.

In the same chromosome with the sex factor and linked with it are the factors for each of these characters; they are dominant in the male, or the one that contains the Y gamete, and recessive in the female, and wherever the Y gamete appears in the zygote, all the male factors appear also.

To illustrate this:

Let xx represent the female parent cell.

Let xy represent the male parent cell.

Let xy– represent the male parent cell with the factor for beard linked to it.

Parents	xx xy–	xx xy–	xx xy–	xx xy–
Zygote	xx female	xx female	xy– male beard	xy– male beard

This gives all the possible combinations.

Trihybridism

Some peculiarities such as various fancy colors in animals require as many as three factors for color in the chromosome; this is called trihybridism. Doubtless there are combinations of four or more, but such combinations would be so complicated as to make it impossible to unravel them.

Inherited Diseases and Deformities

Numerous diseases and deformities are hereditary, among them are hereditary cataract, tylosis; palmosis et plantaris, thickening of palms and soles; epidermolysis bullosa, skin blisters from slight causes; xanthoma, yellow patches in the skin; hypertricosis congenita familiaris, loss of hair soon after birth; multiple telangiectasis, multiple small nevus-like spots; monilithrix, a nodose condition of hair; porokeratosis; diabetes insipidis, occasionally hereditary; distichiasis, eye lashes instead of glands inside the lids; ptosis, drooping eye lid; colobomo or irideremia, absence of iris or congenital defect of ectopia lentis, dislocation of the lens.

Among the deformities are brachydactyly, two bones in the fingers and toes like thumbs. This was the first known hereditary deformity, described by Farabee in a family in Pennsylvania and by Drinkwater in an English family. Webbed fingers and toes. Five fingers on one or both hands.

All these are dominant and are transmitted directly from the affected to the offspring.

Sex-Linked Characters

There are certain hereditary diseases or conditions that are sex-linked that have nothing to do with masculine or feminine characters. Color blindness is one of these, also hemophilia and night blindness, and pseudo hypertrophic muscular atrophy.

Color Blindness

Inherited color blindness is an inherited inability to detect certain colors; it has nothing to do with diseases of the eye or optic nerve or conductive apparatus.

Acquired color blindness is due to some disease of the eye, especially the optic nerve. In most cases of optic nerve atrophy, color blindness appears some time before general blindness, and acquired color blindness has some diagnostic value to an oculist.

Color blindness is a recessive character linked to the female gamete. A man who is color blind can not transmit it to either his sons or daughters, but he does transmit the *factor* to all his daughters and they carry it on to one-half of his grandsons.

One man out of every twenty has some difficulty in distinguishing the different shades of color and one out of every twenty cannot distinguish some of the primary colors, while only one-half of one per cent of women are color blind.

Let xx represent the female life cell or ovum, one x or gamete from the father and one from the mother.

Let xy represent the male life cell or spermatozoid, also with two gametes, one from the father and one from the mother.

Let c represent the factor for color blindness which is linked to the x gamete and when the x gamete enters into the formation of the zygote or impregnated ovum, it takes c or the color blind factor with it.

xxc or xcx will represent a color blind carrier female, female because there are two x's or female gametes in the zygote. The zygote also contains c or the color blind factor, but this female will not be color blind because normal vision for color is dominant in females, but she will transmit the factor to her children so that half of her daughters will be color blind carriers and half the sons will be color blind.

Also xcy will represent a color blind male, there being present both x and y gametes and also the color blind factor c. The man developing from this zygote will be color blind because color blindness is dominant in males.

xcxc will represent a color blind female, a female because there are two x'x in the zygote and color blind because there are two c's or color blind factors in the zygote and none for normalcy.

The following diagrams depict all the possible combinations:

1. A normal woman married to a color blind man.

xx xcy	xx xcy	xx xcy	xx xcy
xxc female color blind carrier	xxc female color blind carrier	xy male normal	xy male normal

The girls resulting from this union are not color blind because normal vision to color is dominant in

females, but they are color blind carriers; the boys are all normal and cannot transmit the defect to their children.

2. A color blind carrier woman married to a normal man.

xcx xy	xcx xy	xcx xy	xcx xy
xcx	xx	xcy	xy
female color blind carrier	female normal	male color blind	male normal

Half of the girls are normal and half are color blind carriers; half of the boys are normal and half are color blind.

3. A color blind carrier woman married to a color blind man.

xcx xcy	xcx xcy	xcx xcy	xcx xcy
xcxc	xxc	xcy	xy
female color blind	female color blind carrier	male color blind	male normal

The girls are half color blind and half color blind carriers; the boys are half color blind and half normal.

4. A color blind woman married to a normal man.

xcxc xy	xcxc xy	xcxc xy	xcxc xy
xcx	xcx	xcy	xcy
female color blind carrier	female color blind carrier	male color blind	male color blind

All the girls have normal color vision, but all are color blind carriers; the boys are all color blind.

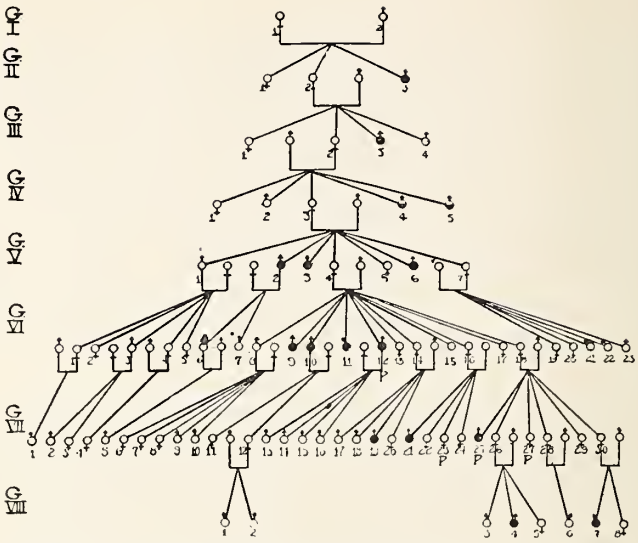
5. A color blind woman married to a color blind man.

xcxc xcy	xcxc xcy	xcxc xcy	xcxc xcy
xcxc	xcxc	xcy	xcy
female color blind	female color blind	male color blind	male color blind

All the children are color blind.

HEMOPHILIA

Hemophilia is a disease in which the blood does not clot well and persons afflicted with it bleed inordinately from insignificant wounds. I have known of instances where men afflicted with it have died from having a tooth extracted by bleeding to death. It is a sex-linked character and like color blindness is linked to the x gamete and is also recessive in the female. It is very rare, far more rare than color blindness. It is so rare that a doctor will see but two or three cases in a life time, and often not any. The tables given for color blindness apply also to hemophilia,



Family tree of hemophiliac family, showing seven generations, all cases in males, but all transmitted by females. Davidson and McQuarry, Johns Hopkins Hospital Bulletin, May, 1925.

and the family trees given for hemophilia illustrate color blindness also.

True hemophiliacs are very rare, and they are practically all men. A woman hemophiliac is one of the rarest things in medicine.

NIGHT BLINDNESS
(Inability to see in a dim light)

Night blindness is a rare disease in this country, although there are a few cases, but in Montpelier in southern France there is a number of villages where it is common and 2,116 pedigrees of persons having the disease have been tabulated. It is a sex-linked character, connected with the x gamete in the male but it differs from color blindness and hemophilia in that it is dominant in the female, therefore if a man has night blindness, all his daughters are night blind and they transmit it to half their sons.

The first known case of night blindness was born in 1637. The disease was described by Cunier in 1838.

Pseudo hypertrophic muscular atrophy is also a sex-linked disease.

FLUCTUATION

Fluctuation is the appearance of some peculiarity in an individual which is non-transmissible and disappears with that individual. A calf born with seven legs, etc., is a fluctuation and not transmitted.

MUTATION

Mutation is the sudden appearance in an individual of a feature which has never been present in that species before, and that is transmissible to that individual's progeny. Such individuals are called mutants or freaks or sports. Mutation was

known to breeders long before Mendelism was heard of, but is one of the most important features of Mendelism. It is mainly by mutation that changes in species are brought about, and it is probable that mutation has more, or at least as much to do with evolution as natural selection. It is probable that small mutations are taking place in individuals all the time and these being transmitted to other individuals, cause more or less change all the time; and besides this, there are sudden very marked mutations in an individual that start new varieties, and this is a start toward a new species.

Mutations are generally dominant characters and follow simple Mendelian law, and segregate exactly as varieties. The ratio is usually 3 : 1 as to appearance and always 1 : 2 : 1 as to breeding.

No mutant character will develop in an environment that is unfavorable to it, for instance, if in a herd of wild cattle, a male should appear without horns, a muley, he would be driven out of the herd by the other horned males if he did not fall a pray to some other animal and would not be allowed to procreate.

Also a character that is well developed will disappear if the species is placed in an environment unfavorable to that character, for instance a herd of cattle is developed to a large size, then if they are under fed, they fail to develop to the full and their progeny also. Again—shetland ponies on a small island where the food supply is limited but the climate is delightful, become small, sleek-skinned, beautiful animals, but transplant them to Iceland, and they soon develop long scraggly hair. Such instances illustrating the effects of environment could be given by the hundred.

There are all degrees of dominance in freaks as well as in established species. In peas, for instance, dominance as to tall and short is complete, so that in the first generation of crosses between tall and short, all are tall, and in the second generation, there are three tall to one short, while in the horned and muley hereford cattle, it is not always complete and about half of the first generation are horned and half dehorned and in the second generation the ratio is nearly the same.

Hereford Cattle

Mutation and the working of Mendel's law is beautifully illustrated in breeding the horns off of hereford cattle.

Hereford cattle were developed in Hereford county in England where for hundreds of years they were bred mainly for use as oxen and incidentally for milk. For use as oxen it was desirable that they be tall and long legged that they might be able to walk rapidly, and that they be powerfully muscled and large boned that they might have strength, and that their fore quarters should be heavy so they could pull better and that the neck be developed to support the yoke well. All these characters were developed to the full, by breeding, and incidentally the breeders developed peculiar skin markings that mark the breed and add to the beauty of the animals. They have white faces, a white streak on their shoulders, white bellies, white feet and the bush of the tail is white, and any deviation from these markings decreases the desirability of the animal. Their horns were long and turned upward.

But in the course of time, oxen were no longer used, and then this breed was converted by breeding into a pure beef type. To do this it was necessary to change the type of the animal. So an animal was developed that carried the same horns and the same skin markings as the oxen, but he is short legged, heavy boned, straight backed and broad backed, heavy and square in the hind quarters and loins where the best cuts of beef are.

The western ranges were full of scrub cattle and long horned Texans, and for awhile people bought the beef from them readily, but as people became more prosperous, they became discriminating in their beef, and these tough Texans found a poor market. To overcome that, the ranchers bought thousands of hereford bulls and crossed them with the scrubs and Texans so that in twenty-five or thirty years, the western herds were largely high grade herefords.

For a time the long horns of the herefords were considered by the ranchers an advantage because an animal so armed could protect himself against the other horned animals and against wild beasts, but after a time new developments arose and ranchers began to dehorn their cattle, because on the ranches it was found that dehorned animals fought each other less, and when they were shedded, more could be put in the same space, and in shipping, more could be put in a car and less were injured and killed in the cars, and lastly steamship companies began to refuse to ship horned cattle on long voyages.

The breeders of short horns or durhams, as they used to be called, were having the same trouble with their horns. Not far from Minneapolis a farmer named McNaire had a small pure bred herd of short horns and one of his cows, Oakwood Gwynne, in 1881 gave birth to twin heifers that were freaks having no horns. The next year, the same cow had a male calf but of a different sire from the twins, that also had no horns.

The twins were named Mollie Gwynne and Nellie Gwynne and the male was named King of Kine. King of Kine and Nellie Gwynne although half brother and sister were crossed, and the result was a polled male, which was named Ottawa Duke.

Mutant characters are usually dominant and breed true, therefore Ottawa Duke being from two freaks was a dominant dehorner. He was crossed with many cows, mostly horned cows, and had fifty-four sons and seventy-five daughters and every one of them was polled. That was the beginning of the polled short horns.

It was believed that herefords never had polled freaks, but to be sure, Warren Gammon, a hereford breeder, wrote to all the hereford breeders in America and Canada, and found twelve such freaks, and bought them all, four males and eight females. One male and one female he sold at once to W. W. Guthrie, and they never were on his farm which was at St. Mary's near Des Moines.

One of his cows had a scur which is an imperfect horn attached to the skin, but not to the skull, so was not a genuine mutant, but probably a throw back from mutant ancestor many generations back. She was an irregular breeder throwing both horned and dehorned calves even when crossed with mutants, which proves her to be an heterozygous animal.

One of the males and two of the females proved not to be breeders, and that is a frequent condition with mutants, and is one of the reasons it is so difficult to cross different species; others were not very prolific and some were quite poor as individuals.

Giant was the best of the males, but he had been stunted when a calf and never developed to the full—weighing only 1800 pounds. He left a numerous progeny and can be said to be the originator of the breed.

About four out of seven of the calves of freaks crossed with horned cattle were polled, showing that dominance in the hereford breed for absence of horns is incomplete—if it were complete, all the first generation would have been without horns. The calves of freaks crossed were nearly all polled.

Mr. Gammon secured the herd of freaks in 1900, the year that Mendel's law was rediscovered, but he knew nothing about it. Had he been familiar with it, and if breeders generally were familiar with it, their problem would be easier.

FERNS

Very interesting mutations have occurred in ferns within the past few years.

The natural habitat of the common sword fern that you have all seen many times in greenhouses and in your homes, is in the West Indies.

This fern was brought into America from Jamaica in 1793, and became a favorite house plant, and grew without change for a hundred years, then about thirty years ago a florist near

Right, Sword Fern. Second, Boston Fern. Five varieties from Boston Fern

Boston found growing from the roots of this fern another kind of fern, having the same general form as the sword fern but finer and thinner fronds and altogether a more delicate plant.

Ferns are endogenous or non-flowering plants and propagate by spores instead of seeds and also by adventitious buds in the roots the same as many flowering plants. This new fern was a mutation from the roots and is called a bud sport. Soon this new form spread all over the United States and was very popular, and known as the Boston fern.

After five or six years, in various parts of the country, some five other forms or mutations from the Boston fern appeared all differing from each other and all differing from the Boston fern more than it differed from its mother form, the sword fern. Since then many other forms have appeared until now these mutant ferns are more popular than the older forms and are sold by florists by the million.

The anti-evolutionist thinks he has a clinching argument when he says that "no one has yet been able to evolve a new species"; yet within our own lifetime—less than a generation—here are ferns called varieties that differ more from the original sword fern than some other ferns of well recognized species differ from each other.

WHITE INDIANS

Ever since Magellan crossed the Isthmus of Panama and discovered the Pacific Ocean, there have been rumors of white Indians in the jungles of Central America, which were for the most

part treated as others of the fabulous stories of unexplored regions.

In 1923 R. O. Marsh, an engineer searching for rubber lands in Darian, some hundreds of miles east of the Panama Canal, actually saw several of these white Indians. The next year he led another expedition into the same country and had

White Indian Girl and Her Brown Sister

with him several scientists and they saw over 400 of these strange people, and brought eight of them back to America—three white ones and five brown ones. They created a great deal of interest in scientific circles and caused a good deal of newspaper and magazine discussion.

In the early part of this year (1925) a third expedition penetrated the region headed by Mr. Marsh and accompanied by Prof. R. G. Harris, director of the Long Island Biological Station. Professor Harris gave the Indians a careful study and concludes that:

1. The Indians of Darian are of a high order of physical and mental development.
2. They are a very old race and speak a language different from any other American Indians and which is allied or similar to Sanscrit.
3. They have a rather high order of government and are a very moral people. There are numerous tribes all under the feudal overlordship of one ruler.
4. Among these Indians which are brown are numerous white Indians.
5. The white Indians have originated from the brown by mutation long ago and the white permeates the entire stock to a large extent.
6. This mutation is a permanent change and is hereditary following the Mendelian law, the white being recessive to the dominant brown.
7. The heredity apparently follows about the same lines as the white and negro races. There are: dark brown—the original type of color; light brown; very light brown, and white.
8. They are not pure alibinoes because they have golden yellow hair instead of white, and they have hazel eyes instead of the pink eyes of the pure albinoes. Their physical characteristics are all Indian except the color, showing they are not descended from any cross with Caucasians.[1]

I have shown what I consider beautiful examples of evolution by means of mutation following the Mendelian law that have occurred in the lifetime of everyone here:

1. In the vegetable world in the ferns.
2. In the animal world in the polled cattle.
3. In the human race in the white Indians.

If these marked and visible changes can be brought about within the period of these few years, what is the limit of changes that have been brought about within the geological periods of millions of years?

Inbreeding

Inbreeding is the crossing of near relatives. In the human family it has long considered to be a disastrous thing for cousins to marry, but the effects of inbreeding depend entirely on the parents, that is just what they have to transmit. Breeders of domestic animals often inbreed with deliberate purpose, and inbreed more closely than cousins, and often get very good results. If there are strong characters in two individuals that they want brought out or intensified, they cross them even though they are near relatives—father and daughter, or brother and sister.

The ill-effects of inbreeding in the human race is that there are so often bad characters in families and if they are crossed, these characters are likely to be preserved in the offspring and even intensified. For instance, if two relatives, each of them having some nervous derangement such as hysteria, this would be intensified in some of the children and there would be extreme nervousness and mental instability or even insanity. And

1. Good articles on these people may be found in the March, April and June World's Work (1925).

strangely enough, it is persons that have these defects that are most likely to intermarry.

There are some notable exceptions to this however. Erasmus Darwin and Josiah Wedgewood were very great friends. They were two great men. Wedgewood was the Henry Ford of his time and more than that for he was a statesman and a philanthropist as well as a manufacturer. He it was that brought the manufacture of pottery in England to its own and originated Wedgewood ware and Queensware, and the blue dishes that are now so much desired. Wedgewood married his cousin Sarah Wedgewood, and their daughter married Robert Darwin, Erasmus Darwin's son, and became Charles Darwin's mother; Charles himself married another Wedgewood, his cousin and they had four sons. One became professor of astronomy at Cambridge, another became a noted mathematician and the other two both became noted engineers. In this case, there were no hereditary weaknesses in the families and the strong qualities were accentuated.

It was the Egyptian law under the Ptolemies that Pharioh should marry his sister. Cleopatra was the last of the Ptolemies and was married to her brother until Julius Caesar took her away from Egypt to Rome. This is surprising too, because the Ptolemies were Greek and not Egyptian.

In ancient Peru, it was the law for the Inca to marry his sister and that was practiced for hundreds of years. The Inca had many wives, but his queen was his sister and their children were heirs to the throne. The custom does not seem to have had any serious effects for the last Inca before the coming of the Spaniards was a man of exceptional ability, and was a conqueror and organizer and able ruler up to the time he was captured by the Spaniards.

CANCER

Maud Slye working in the Sprague Institute for Cancer Research in Chicago, for a number of years has been studying mice to determine whether cancer is hereditary. She has raised over 40,000 mice and kept accurate family trees and pedigrees, and all that have died have been autopsied and all laboratory methods used to determine the causes of death. Five thousand tumors have been examined to determine their pathology.

Mice in their wild state are short lived, having so many and relentless enemies, but she keeps them free from all these dangers and in the most perfect hygienic surroundings so they live out their natural lives.

She found that mice in their breeding follow the simple Mendelian law. A common house mouse crossed with an albino produces three gray and one white in the second generation, gray being dominant to white and in breeding the ratio is 1 : 2 : 1.

Bateson long ago (Mendel's Principles of Heredity, page 74) saw an entirely different condition as related to the colors of domesticated mice, but he worked with mice of no less than six different colors, and found ratios of 12 : 3 : 1 and in others a ratio of 9 : 3 : 4; the colors are agoute, chocolate, cinnamon agoute, blue (dilute black) and silver faun, to say nothing of white and yellow. These are fancy breedings and too complicated to be practical.

Maude Slye found as before stated that gray is dominant to white and breeding follows the simple Mendelian law ratio 1 : 2 : 1 . She also found that certain mice if they live long enough, that is, live long enough to reach the cancer age, develop cancer and what is more, transmit cancer to their offspring, following strictly the simple Mendelian law. Resistance to cancer being dominant and the tendency to cancer recessive. She segregated out dominant strains—those resistant to cancer—that never develop cancer, on the other hand she segregated recessive strains—those with the tendency to cancer—and got families in which every member developed cancer, and she carried these as high as 120 generations.

This would seem to prove conclusively that cancer, at least, mouse cancer is hereditary. If this is true in the human race, the war on cancer is well nigh hopeless, for to prevent people from marrying simply because one or the other's parents or grand-parents had cancer would be impossible.

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MAJOR WALTER REED AND YELLOW FEVER

D. S. Fairchild, M.D., Clinton

In February, 1900, The Pan-American Medical Congress met at Havana, in the University of Havana buildings. It was at this time that Major Walter Reed presented a detailed account of his work in the study of yellow fever.

Yellow fever was a disease dreaded and feared in all the Gulf ports and the lines of communication beyond. It was a disease that arrested the construction of the Panama Canal and made traffic and commerce with tropical countries hazardous. There were men who believed that the cause of the disease could be found out and that the disease could be controlled. Surgeon General Sternberg believed it. Dr. Carlos Finlay of Havana believed it, and there were others. It was almost discovered, but there were a few links missing and those must be supplied, but it was more than one man could do to find them and so a group was formed, consisting of Major Walter Reed of the United States army, contract surgeons, Dr. James Carroll, Dr. Jesse W. Lazear and Dr. Aristides Agramonte.

It was understood that Major Reed would present a full and detailed account of the work and how it came about that it was known definitely that the disease could be prevented by simple and certain methods. Therefore a group of American doctors were sufficiently interested to make the trip to Havana to celebrate one of the great discoveries in medical science. (We herewith present a group picture of the American delegates.) Major Reed read an extended report of the investigations in the auditorium of the University of Havana, to a rather small audience. The report was first read in English and then in Spanish. The writer had some intimation of the general character of the report, but was not prepared for the profound impression it had on his mind as he listened to each word as it came from the lips of the reader. Two hours were occupied; it seemed only so many minutes. Major Reed told how Lieutenants Carroll, Lazear and Agramonte offered themselves as subjects for the experiments, offering themselves to be bitten by known yellow fever carriers and to almost certain death. There was little hope of escape from the disease; the only hope was the possible recovery from a disease from which they were not in any degree immune. The details of the investigation are of record and we shall not attempt to relate them, only the impression it bore on the mind as we were told, how the officer extended his bared arm through the wall of the building, silently inviting the death dealing mosquito to discharge the yellow fever germs into the unprotected flesh. How another passed a silent night in a closed room among the soiled clothing and vomit saturated linen from one dead of yellow fever, without knowing what might happen—but did afterwards know he was safe. We listened to the hiring of human subjects for this dangerous work of finding out about yellow fever, although not so dangerous to partly immune natives, not all recovered. It was easy to picture a drama from the solemn words of a master investigator.

For two hours we listened with profound attention to a relation of facts that were to revolutionize commerce with tropical America and add millions to the wealth of America, at an expense to the few who were willing to sacrifice their lives for the welfare of mankind. No one now fears to visit the West Indies, when formerly only the most hardy had the courage to visit and trade among these frequently stricken people. But who now think of these heroes? Indeed, their names are almost forgotten; far different is it of those who sacrificed their lives in military adventure. As the writer, while waiting on shipboard for the loading of the last bags of sugar, wondered if it was indeed true, that the fumigation of ships and cargoes against yellow fever was at an end, and the expensive and trade disturbing quarantine would never again be necessary. This thought as I looked from the deck railing to the last bag, coupled with Major Reed's words, left an impression that has never departed from my mind.

How the world in its hurry forgets how things came to pass! We are filled with admiration at the thought of the magnificent Walter Reed Military Hospital in Washington, but what else? Dr. Jesse Lazear died of yellow fever in his endeavor to find the facts, Dr. Carroll recovered from the disease and died soon after, leaving a

American Delegates to Pan-American Medical Congress at Havana, February, 1900.

large and destitute family, and a considerable mortgage on his modest home.

Not so many years ago word came to Atlantic City, where the American Medical Association was in session, that Dr. Carroll's family was to be evicted from their home in Washington, because they could not satisfy the mortgage. In a few minutes, only, was a sufficient sum of money raised to pay off the mortgage and a little more. With the usual delay, Congress voted a small pension to Mrs. Carroll. Only a few years ago we learned that Lieutenant Carroll's mother died in a charity ward in a Washington hospital. The great commercial world which was so directly benefited by the yellow fever group has wholly forgotten these men.

At the present moment the medical world is asked to contribute considerable sums to establish and endow a Gorgas Memorial as a School of Tropical Medicine, an institution of almost incalculable benefit to the civilized world, and to the glory of the medical profession. But when we think of the immense value of this memorial to the commercial world which seeks great financial advantages in the tropics, we are amazed that these interests do not at once assume the financial burden. We must give great credit to the United Fruit Company for the work they are doing in eliminating diseases from the tropics through a large group of trained medical officers at their various stations. Praise must be given to the Rockefeller Foundation in their work of eliminating disease and the improvement in the conditions of living among people forgotten until the yellow fever investigations and the application of Surgeon General Gorgas.

As I think of it now, who could at the time I have referred to, measure the great things that were to happen in tropical America, and it is with profound thankfulness that it has been given to us to bear witness to these great things. Twenty-five years have passed since our little group of delegates witnessed in Havana the beginning of a great epoch in tropical and preventative medicine, and we may ask, what may another generation witness?

FEES IN ADVANCE

The Journal of the Indiana State Association reports the case of a successful surgeon who makes it an invariable rule that in all operations, not distinctly emergency operations, an advance payment of all, or at least half of the operative fee is required, except when the patient has an established credit.

MEDICO-LEGAL—RESTRICTIONS ON PHYSICIANS OF PROHIBITION ACTS

(Lambert vs. Yellowley, et al. [U. S.], Fed. R. [2nd] 915)

The United States circuit court of appeals, second circuit, in upholding the validity of the national prohibition acts as they effect the rights of a medical practitioner to prescribe spirituous or vinous liquors in the treatment of disease, says that the fact may be noted that whether or not whiskey, wine or beer has a therapeutic value in the treatment of disease is a very much disputed question in the medical profession. In 1917 the American Medical Association, which has a membership of 150,000 physicians, passed a resolution discouraging the use of alcohol as a therapeutic agent (which resolution is quoted in a footnote to the court's opinion). It is impossible for the court to say as a matter of law that the limitation placed on physicians in prescribing liquor as a remedy for disease is not fairly adapted to the end of protecting the people of the United States against the evils which result from the use of intoxicating liquors. It was for congress, and not the courts, to determine whether it was necessary or advisable to permit these liquors to be prescribed at all by physicians, and, if to be prescribed, to fix the quantity that may be prescribed at any one time or within a fixed period. A person has an inherent right to life and in order to maintain it a right to eat and drink. But the right to drink liquors which are intoxicating, the state or the United States may take away, and in order to do so effectively the government may take away the right to drink certain liquors containing alcohol sufficient in amount to produce intoxication. That much is settled by the decisions of the courts; and for the same reason which leads the law-making power of the state or of the United States to prohibit the use of liquor containing a less amount of alcohol than is required to make it intoxicating, the law-making power may restrict the physician as to the amount of such liquor he can prescribe to his patient in a given period. The court cannot say that a physician's right to prescribe alcohol in the treatment of disease is inherent, and cannot be regulated or controlled by the law-making power of the state. The proposition is unsupported by authority and is unsound in principle. —Journal A. M. A.

A NEW MEDICAL JOURNAL—THE AMERICAN HEART JOURNAL

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Dr. Lewis A. Conner, of Cornell University, Medical College, New York, is editor, associated with an advisory board of distinguished internists of leading cities of the East and the Middle West.

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AN APPRECIATION OF GERSHOM H. HILL, A.M., M.D.

D. S. Fairchild, M.D.

I feel that I may speak with full sympathy and appreciation of Dr. Gershom H. Hill. He was but one year the senior of the writer and our professional ambitions were for fifteen or twenty years in similar lines.

Fifty years ago or more, in this country, there was but little distinction between physicians and surgeons, except in cities of great population. In England, lines had been drawn separating the barber surgeons from their descendants, John Hunter, Asthley Cooper, Wm. Brodie and others. But until the time of Lister there were insuperable difficulties in the way of surgery as a special branch of medicine, indeed, the surgeon might be considered as the assistant, or the associate of the physician who was the real aristocrat in the medical profession, who employed an associate or assistant of greater manual dexterity.

But the studies, investigations and discoveries of Pasteur opened up great possibilities for a new surgery and to greatly extend the knowledge of medicine as a whole.

Within the lifetimes of the men we meet tonight to honor, has come the changes we call modern medicine. When they entered the field all except small groups in our great cities were physicians and surgeons. For tempermental or other reasons one man had a greater reputation in one field than in another, but no fast lines were drawn, except as already mentioned. Limiting ourselves to our own country, we may cite as examples of the exceptions, Willard Parker and Alonzo Clark, Valentine Mott and Austin Flint, S. D. Gross and George B. Wood. These men were great and accurate observers; they were close students and possessed a clear knowledge of what was then known of medicine and surgery; they saw many things that did not reach the minds of other men; they were what we now call "outstanding" men, men who saw the way without signposts. But the time was near at hand when the practitioner, or student, could select his life work in more limited fields with greater success. When the few remaining men of earlier days saw the approaching change, they either directed their course accordingly or drifted with coming events. Like Dr. Priestley, one directed his course in the path of internal medicine, or like Dr. Schooler, in the field of surgery. It may be said that these men made no distinguishing discoveries, or brought forth era making contributions, but they did contribute immensely to increasing the common knowledge of the great things of medicine. They were pioneers, they were the men who blazed the way, and through industry, observation, hardship, and the assuming of great responsibility made the way comparatively easy for the generation following them. Who can appreciate the trials and the anxieties of Dr. Priestley in unraveling the cause and nature of disease, without the aid of laboratories or x-ray, or the blood-pressure apparatus, or the electrocardiograph; or of Dr. Schooler in the face of an abdomen which contained a disease the cure of which could not be expected without an operation, and without the aid of a hospital, trained assistants, or trained nurses. Should we not honor such men, who stood at the borderland of modern medicine and accomplishment with a vision to the future?

Dr. Gershom H. Hill was more fortunate than most men of his generation. He had a long line of distinguished ancestral traditions, of high ideals and accomplishments, men of learning and culture, which found a receptive soil in the brain of Dr. Hill. It was not until he had secured a broad and liberal culture that he ventured upon his life work. He was thus prepared to take up the most difficult and complex branch of medical practice. It is true that after graduating from a high class medical college Dr. Hill engaged for a short time in general practice, but he never lost sight of the great purpose he had in mind, the caring for, and treating those sick in mind, but unlike the gentlemen whose names we have mentioned, his choice was already made and the op-

portunity soon came by an appointment to one of our most important insane hospitals, as assistant physician.

Dr. Hill became a member of the Iowa State Medical Society as a delegate from the Independence Hospital for the Insane at the Cedar Rapids meeting in 1877. The writer recalls this first meeting of Dr. Hill. He wore a white top hat and the regulation Prince Albert coat, faultlessly cared for, and altogether presenting a distinguished appearance, so much so that we were led to inquire who this gentleman was. We mention this even at the risk of it being assumed that the writer is living in the past. From that time on a warm friendship grew up between us. Dr. Hill was a regular attendant at the meetings of the State Medical Society and the prospect of meeting him was looked forward to with pleasant anticipation.

The fact that Dr. Hill entered upon his chosen field of professional work without a period of apprenticeship in general practice, including a period of chaotic indecision as to what course to pursue, does not imply that he drifted in lines of least resistence, as a matter of fact he was a hard worker and a very industrious man, and when he became the responsible head of the institution to which he had been appointed he introduced new methods as far as the ruling authorities would permit. This was slow, because there was at that time a general belief that what we call an Insane Hospital was in fact an Insane Asylum.

Psychiatry is not an easy branch of medicine nor is it a stationary science. For more than ten years we were much interested in diseases of the nervous system and this fact tended to bring us together frequently in court cases where mental and nervous diseases were under consideration, especially in Will cases and in cases of injury in which it was alleged that the claimant was suffering from great and permanent injuries to the nervous system.

For many years, even extending well into the new era in medicine, but few cultivated the study of diseases of the nervous system. At that time many of the facts of the anatomy and physiology of the nervous system were unknown and a diagnosis was built upon a rather uncertain symptomatology, and diseases of the mind were largely speculative. At the time of the Guiteau trial we were in New York City. Numerous celebrated alienists were subpoenaed on both sides and many others testified through the newspapers. Among the latter were Dr. William A. Hammond and Dr. E. C. Spitzka of New York, Dr. Gray of Utica Insane Hospital, who testified that Guiteau was responsible, was the chief point of attack and it was very bitter. About fifty years ago the Journal of Nervous and Mental Diseases was organized by Dr. J. S. Jewell, for whom we had a great admiration, which I read with great care for more than thirty years, until it became so technical and so learned that I was at last obliged to give it up. When I was a college student Sir William Hamilton's work on Metaphysics was the standard work on what was called Psychology and formed the opinion of educated men on the mind. Soon after I came to know Dr. Hill I was requested by the President of the College at Ames to deliver a course of twenty lectures each year on the physiological side of psychology (these lectures were continued for a period of ten years or more), before he took up Sir William Hamilton with the senior class. This college work and later a service of twenty-five years as medical expert for several railway corporations, brought a familiarity with court work in accident cases and in cases where the nervous system was involved, frequently brought me in contact with Dr. Hill, and as we had much in common, a warm feeling of regard grew up. Dr. Hill for many years was the best known expert in insanity cases in Iowa and rarely did an insanity case come up in our courts, that Dr. Hill did not appear on one side or the other. Dr. Hill was always a convincing witness and under the most grilling cross examination never lost his presence of mind or became confused.

It may be said of Dr. Hill that to his last days he never lost his interest in general medicine or in medical literature. The growing State Medical Library was an inspiration to him and as long as his strength permitted, made monthly visits to the library for the purpose of encouraging Miss van Zandt in her onorous duties. The untimely death of Judge Demer was a serious loss, which only in small measure could be compensated for by added service of the committee on library.

AN APPRECIATION OF JAMES TAGGART PRIESTLEY, M.D., D.Sc. (UNIVERSITY OF PENNSYLVANIA)

(Memorial Service, Polk County Medical Society)
Tuesday, January 20, 1926

Walter L. Bierring, M.D.

It is always difficult to present a personal estimate of a friend and colleague without having the strong feelings of affectionate regard influence the true measure of the man and his work.

My acquaintance with Doctor Priestley covers a period of thirty years, and dates from the meeting of the Iowa State Medical Society at Creston in April, 1895. It was my first attendance, and

also the first appearance on the program. I had been asked to present the results of the preparation and use of anti-diphtheritic serum, demonstrating at the same time the first antitoxin successfully prepared at Iowa City. Although fresh from several years of work in European laboratories and full of scientific enthusiasm, I well remember the nervous anxiety at the thought of appearing before the body of successful practitioners composing our State Society. The encouraging words of Doctor Priestley and personal interest in my simple efforts was an inspiration and made a distinct impress on this period of my life. I readily recognized the qualities which made him stand out among his fellows, as one destined to advance the medical ideals of his time. The contacts of succeeding years have fully maintained and strengthened these first impressions.

The wide acquaintance of Doctor Priestley with the leading medical men of his day has always appeared to me as quite remarkable. To illustrate this I will cite one incident. The first meeting of the American Medical Association that I attended was the session held at Columbus, Ohio, in 1899. At an evening function I was privileged to sit at a round table and there met for the first time through Doctor Priestley's introduction the following leaders: Drs. Osler, Keen, Hare, Billings, Wm. J. Mayo, Thayer, Musser, Anders, and George Dock. The intimate comradeship that seemed to exist between Doctor Priestley and each of the others was particularly noticeable.

On my last visit to Doctor Osler, then Sir William Osler, in July, 1919, at his home 13 Norham Gardens, Oxford, we were hardly seated before he asked "How is my old friend Priestley —tell him that I recently acquired another interesting book of his ancestor Joseph Priestley". I shall always retain as a vivid memory the picture of Osler standing in the doorway, smiling in his happy way, saying adieu, and then as we drove slowly away—a last wave of the hand—and the parting words, "Don't forget greetings to Priestley".

The Iowa State Medical Society honored Doctor Priestley with the chairmanship of the Medical Section in 1896, and the presidency in 1900. In 1896-97 he served as secretary of the Section on Practice of Medicine in the American Medical Association, Dr. John H. Musser, Sr., being the chairman. As a member of the board of trustees of the A. M. A. from 1894 to 1900 he was largely instrumental in framing the articles of incorporation governing its present plan of organization.

Probably no professional distinction so gladdened the heart of Doctor Priestley as the conferring of the honorary degree of Doctor of Science by his Alma Mater—the University of Pennsylvania, on his fifty years of graduation as a Doctor of Medicine. It was to be conferred at the University Convocation February 22, 1924, but unfortunately a severe illness prevented Doctor Priestley from going to Philadelphia. An appeal was made to Dr. William Pepper, the dean of the School of Medicine, and Dr. Edgar F. Smith, the provost of the University to have the degree conferred in absentia. As this was contrary to all tradition and custom, it required several meetings of the University Senate before it was granted and the diploma forwarded to Doctor Priestley at his home.

It is but right that a man should be judged by his own work, and not by the deeds of his forefathers, but it is interesting to recall that the name of Priestley has been honored by fellowmen in preceding generations as well as in this.

Our Doctor Priestley had his own way of expressing it—"The best of the Priestleys are like potatoes—under the ground". Nevertheless it is pleasing to note that a direct lineal descendant of Dr. Joseph Priestley, the discoverer of oxygen and one of the most remarkable characters of his period, labored here among us in the interest of Iowa medicine during the past half century.

It was my privilege in 1915 to visit among the kinsfolk of our Doctor Priestley in Northumberland, Pennsylvania, and I then sensed the influence of traditional environment in the moulding of his character. The large brick house built by the distinguished ancestor, Dr. Joseph Priestley, upon his arrival in America in 1794 still stands overlooking the waters of the beautiful Susquehanna. There he died in 1804 and in a nearby cemetery is his grave.

Here in Northumberland the great great grandson, James Taggart Priestley, was born July 19, 1852.

Interesting mementoes of Dr. Joseph Priestley are preserved in Northumberland such as the original manuscript of his autobiography, his signet ring, old microscope with single lens, chemical apparatus, and interesting correspondence with Benjamin Franklin and Dr. Benjamin Rush.

The best estimate of Dr. Joseph Priestley is given in the address of Thomas Huxley delivered at the presentation of the statue of Priestley to the town of Birmingham, England, on August 1, 1874, the centennial of the discovery of oxygen, and I quote from his closing words—"If the nineteenth century is other and better than the eighteenth it is in great measure to him and such men as he that we owe the change. If the twentieth century is to be better than the nineteenth,

it will be because there are among us men who walk in Priestley's footsteps".

Sir William O. Priestley (1829-1900) the English obstetrician and pupil of Sir James Simpson, of chloroform fame, was a grand nephew of Dr. Joseph Priestley.

Through the line of female descendants, our Doctor Priestley was a cousin, several times removed, of Hilaire Belloc, the well known French essayist and war critic. He visited with Doctor Priestley while on a lecture tour in Des Moines several years ago.

It is interesting to note that all the physician members of the Priestley family in this country are graduates of the Medical School of the University of Pennsylvania.

In the minutes of the trustees of the University is a record of November 11, 1794, which states that Dr. Joseph Priestley was unanimously elected professor of chemistry. For personal and family reasons he felt compelled to decline this honor, to which he refers in a subsequent letter to Dr. Benjamin Rush, but he attended frequent meetings in Philadelphia and delivered several short courses of special lectures, so that he contributed to the medical teaching of that period.

The first member of the family to obtain the degree of Doctor of Medicine from the University of Pennsylvania was Joseph T. Priestley, a great grandson of the chemist, graduating with the class of 1844. He practiced in Northumberland and became the preceptor of James Taggart Priestley who graduated in 1874. Then his son Crayke S. Priestley twenty years later, in 1894, received his degree from the same medical school. After several years of European study he began the practice of medicine in Des Moines, and his untimely death in 1904 was a distinct loss to scientific medicine.

Now the two sons of Dr. Crayke S. Priestley, the seventh generation in the line, will carry on the family tradition. Dr. Joseph Biddle Priestley being a graduate of the class of 1925. and James Taggart Priestley II will receive his degree at the June commencement this year.

If our friend had any distinctive hobby it was that of travel, and there were probably very few regions of the globe open to the traveler, with which he was not familiar.

In 1888 he made his first visit to England and the continent, and during the following thirty years he spent from two to four months each year in travel. These often included a national or international medical meeting as the principal objective. Among the noteworthy trips should be mentioned the girdle around the globe in 1904; an extensive tour through Russia, the Scandinavian countries including the North Cape in 1905, South America in 1913, Japan in 1915, New Zealand and Australia in 1916. In the later trips the two grandsons were usually companions of Dr. and Mrs. Priestley.

Richly endowed though he was by nature, this frequent contact with different peoples and better understanding of human affairs, added greatly to his versatile talents. It was but natural that he should grace every company in which he mingled. It is not too much to say that to have known Doctor Priestley was one of life's treasured privileges.

As a family physician and cultured clinician he ranged among the best. His influence was felt far afield, extending beyond the confines of his community and state. He adanced the cause of medical progress and deserves a distinguished place in the annals of American medicine.

AN APPRECIATION OF JAMES TAGGART PRIESTLEY, M.D., 1852-1925

Lewis Schooler, M.D.

The death of Dr. James Taggart Priestley which occurred December 11 of last year, removed from the membership of the profession, not only of this city, but of the state, one of its most worthy members. His genial disposition and his high professional acquirements endeared him to all those with whom he came in contact, not only among the members of the profession, but with his patients, and the public at large. Few men had the faculty of holding the confidence of his families that he had.

In medical meetings he was always interested, and although not a frequent contributor, in the way of reading papers (always contending that he was not a fluent writer), he was always a ready debater on nearly all subjects, particularly those pertaining to internal medicine.

He was never prolix or indefinite—his hearers were never left in doubt as to his views on any subject which he discussed.

His language in debates was plain, simple, and positive, and his views were in general those of the latest thought on all advances in medical literature. He was not contentious but satisfied with his statements and courteous to his opponents, and was fair in his treatment of all, especially to the younger members.

With the immense and laborious practice which was his for more than forty years, it was a mystery to those who were closest to him how he found time for the amount of study that he did. For the first ten years of his professional life

he never took a vacation. After that he traveled almost over the civilized globe.

Jealousy was not a part of his make-up. The success of other physicians was but a stimulus to greater exertion on his part.

He was of a forgiving disposition and when wronged or insulted, he preferred to consider it as unintentional than to consider it as really intended. He had no real enemies that we knew of. He profited by his friendships and criticisms by his friends were always welcomed. As a counselor and a teacher he ranked among the best, and was always appreciated by members of his classes, and will long be remembered by the students of the Iowa College of Physicians and Surgeons, Medical Department of Drake University, of which he was one of the organizers and continued with it until its demise.

He was a graduate of the University of Pennsylvania — an institution which the name of Priestley has been connected with since its beginning, Sir Joseph Priestley his great grandfather, the discover of oxygen, being one of the founders of the medical department.

RESOLUTIONS OF RESPECT AND AFFECTION—GERSHOM H. HILL, A.M., M.D.

Polk County Medical Society

Whereas: The State of Iowa, the City of Des Moines, and the Polk County Medical Society have recently sustained a great loss by the death of Dr. Gershom H. Hill, and

Whereas: The Polk County Medical Society in executive session assembled desires to pay a fitting tribute to a member who has been much loved and honored because of his stern integrity, his unfailing geniality, and his untiring scientific effort. Therefore be it

Resolved: That the Polk County Medical Society extend to Mrs. Gershom H. Hill, and Dr. Julia H. Hill its heartfelt sympathy in this time of bereavement, and its congratulations on being privileged to reflect and perpetuate the influence which has and will emanate from the sterling qualities of an honored husband and father.

RESOLUTIONS OF RESPECT AND AFFECTION—JAMES TAGGART PRIESTLEY, M.D., D.Sc.

Whereas: The Polk County Medical Society mourns the loss by death of one of its most distinguished and beloved members, Dr. James Taggart Priestley.

Whereas: In the remarkable record of fifty years of devoted service as a physician to the sick of this community and loyal affiliation with this society, Doctor Priestley has left a heritage of the highest ideal of medical practice.

The period of his medical life represents a new era in medicine, yet he was ever in the forefront of medical progress.

His superior cultural attainments, professional leadership and rare personal charm gained for him recognition in the higher medical circles of this country, and contributed in large measure to the prominence attained by Des Moines as a medical center.

The enduring testimony of medical colleagues and friends will accord to Doctor Priestley the distinction of having best exemplified the life of the revered family physician and the cultured clinician of this day.

In this spirit of esteem and regard from his fellow members it is

Resolved: That a copy of these resolutions be recorded in the minutes of the Polk County Medical Society, a copy be transmitted to the medical press, and a further copy, with expressions of deepest sympathy be conveyed to the bereaved family of Doctor Priestley.

RESOLUTIONS OF RESPECT AND AFFECTION—JAMES TAGGART PRIESTLEY, M.D.

Calhoun County Medical Society

Resolved: That the Calhoun County Medical Society at the annual session assembled, December 17, 1925, recognize in the recent death of Dr. James Taggart Priestley of Des Moines, Iowa, a loss to the medical profession of the State of Iowa, that because of the outstanding achievements in medicine of Dr. Priestley, should not go unrecognized by even a small component society such as ours.

Therefore, be it resolved that resolutions of respect to the memory of this great and good man be spread upon the minutes of our society, and a copy thereof be forwarded to the widow of James Taggart Priestley, M.D., at Des Moines, Iowa, and to the Journal A. M. A.

P. W. VanMetre, M.D.,
Eleanor Hutchinson, M.D.

ANNUAL DUES

Iowa is liable to fall into the last place insofar as dues to the State Medical Society are concerned, without apparently any vigorous protest on the part of its members. The fact of our dues being less than of other states of our size and importance is no reason why we should delay paying them. The small contribution of five dollars will still be welcome to Secretary Throckmorton.

Editor Long of the Nebraska State Medical Journal, in the November number tells us editorially what they are doing in Nebraska, and, like what he generally says, is worth repeating.

"Reference has several times been made in these pages to the increase in membership dues ordered by the House of Delegates at the last annual meeting of the Nebraska State Medical Association. The increase is effective January 1, 1926, and is from $5, the present dues, to $8. The increase was brought about, because the delegates believed that more money was needed in order that the Association might function better.

"The Medical Defense Committee, which has done a great deal for the profession, was found to be short of funds to carry on the increasing amount of work piling up, due to increase in number of malpractice suits; the Publicity Committee, created several years ago, and from which much should be expected, has so far been unable to function properly for want of funds; the tendency of the times is toward centralizing the various activities of medical associations in an efficiency man—a full-time paid executive secretary, editor and general manager, and many of those deeply interested in the activities and success of the Association, are looking forward to a time in the near future when money enough will be available to bring this about."

THYROID SYMPOSIUM

In this number of the Journal may be found a modern and up-to-date discussion of the Thyroid. Dr. Senty introduced the discussion by a paper on Medical Considerations; Dr. Rowan, Surgical Considerations, and Dr. Burcham, X-ray and Radiation. The three papers presented the present approved methods of thought and treatment. The discussions proved harmonious until twenty-two pages of manuscript copy was injected which placed the essayist on the defensive.

At the close of the reading of the papers we felt that we had before us a well worked out exposition of what was known of goitre and its treatment. When the discussion was closed we began to suspect that a conspiracy of harmony of opinion had been worked out and that the Thyroid was not what we supposed it was. Dr. Senty had been liberal in his historical references and his quotations of authorities. We had been agreeably impressed with the conservative views on surgical considerations by Dr. Rowan and the limits of usefulness of radiations apparently so well presented by Dr. Burcham. After these apparently instructive papers had been demolished by more radical observations and after it became apparent that there were rather divergent opinions on almost every phase of the subject, the president from his high judicial position began a philosophical exposition to establish a reconciliation of divergent opinion, to the effect that a certain school of medicine recognized high authority and thus escaped controversy, that every member of this school was certain, without question, that the adjustment of certain vertebra were always and invariably the proper treatment, and that this certainty of applicaion had a wonderful impression on the public mind, showing the advantage of chiropractic practice over the uncertainties of, and our divergence of opinion as to the nature, cause and treatment. We are not quite sure this was what Dr. Fuller meant but it will serve our purpose. In reading over this discussion we were impressed with the difference between a carefully prepared paper on a complex subject and an offhand discussion from the floor under the pressure of the moment. Seriously considered, a difference of opinion is a most hopeful state of mind for it leads to revision of views, however, tenaciously held, and the acceptance on authority alone has a most deadening influence on progress. If we were to go back fifty years and compare our knowledge then on the thyroid with what we know now, we may realize what an immense amount of productive work and experimentation has been accomplished. That we have not reached absolute knowledge is made certain. It is undoubtedly true that if we could contend that all knowledge had been reached, and that we were all of one mind in problems in medicine, such a contention might have a helpful influence on the public mind but we would soon be in the position of so many systems of medicine directed by single-track-minds in a condition of intellectual decay which has followed such systems since the beginning of time.

THE WRITING OF MEDICAL PAPERS

By Maude H. Mellish, Editor of the Mayo Clinic Publications; Second Edition, Revised; 12 Mo. of 168 Pages. W. B. Saunders Company, 1925. Cloth, $1.50, Net.

We have a feeling that editors of Medical Journals will consider themselves under a debt of gratitude to Mrs. Mellish for this book, and will indulge the hope that every medical practitioner who writes for publication will provide himself with a copy. We have on proper occasions called attention to the condition in which we sometimes find papers from men who have received a fairly good education, but who have written carelessly. We are pleased to note that in the past fifteen years a marked improvement has taken place, but there is still opportunity for great improvement.

Our first criticism is, that too many papers are written single spaced; the lines run so close that sometimes one line runs into another. These papers are not only difficult to read, but confuse the printer and introduce too many errors in the

proof, and it not infrequently happens that the author in making some correction, writes in with a coarse pencil, something which adds to the confusion; what the correction means we are not always able to determine. If, instead of single spacing, the author would double space and leave a sufficient left-hand margin, he would be able to make a carefully written correction either in the space between the lines or in the margin; this would lead to a more attractive and legible manuscript.

As Mrs. Mellish says, all manuscripts should be double spaced and the writer should leave one or two inches on the left hand side for notation.

Another serious fault is the almost indiscriminate use of capitals when a medical term is used, and a very common practice is using capital letters when the writer wishes to emphasize a word. Do not use abbreviations except in rare instances, they may be misleading and certainly do not look well in the manuscript or on the printed page.

The writer should not say operated, but operated upon. Slang phrases should not be used. Punctuation is a difficult art, and the placing of punctuation marks often changes the meaning of a sentence. Long sentences are generally objectionable and often obscure the meaning, and the use of comas before the sentence is completed is bad.

The form of the paper is important. On the title page the title should be written plainly, with the name, residence of the author, with space enough to make the title and name of the author clear, and, if read before some society, that also should be expressed fully. We have received papers without the name of the author, and have only been able to determine if it was read before a society by reading the paper, but that does not enable us to know what society. Sometimes we have learned the name of the author by examining the program of his society. The title of the paper may give us the name of the author.

Another difficulty is in relation to the prompt return of the author's proof. For some years we have had two copies of proof made to protect us from these delays.

Another fault of many writers is the long discussion of certain anatomical and physiological facts before the subject of the paper is reached. Sometimes, of course, this is necessary, depending upon the nature of the paper.

We have one very important fact in mind and that is, the author should read over his manuscript, correct and change until he is satisfied that what he has written fully expresses his views in convincing language. A well written and well delivered paper is often more effective than the contents of the paper would appear to warrant. The man who begins his paper as he leaves home and finishes it in his room at the hotel, is certainly a gifted man; generally, however, it is not worth reading or printing. In these days of accurate knowledge such shoddy productions are quickly discovered and the author's reputation suffers. When a physician accepts a place on a program he should, for his own sake, if for no other reason, prepare his paper with great care, and if it is not up to the high standard at his first attempt at authorship, he is on his way to success.

Mrs. Mellish writes of many things we have not referred to, which will be of great value to the prospective writer and also to those more experienced.

ANNUAL REPORT OF VETERANS' BUREAU

In the annual report of the United States Veterans' Bureau, just issued, General Frank T. Hines, director, recommends the enactment of legislation by congress to create a medical corps in the bureau similar to that which exists in the army and navy. "One of the first and most necessary steps towards raising the standard of the medical service", says Director Hines, "is to make it sufficiently attractive to secure and retain well trained, conscientious physicians, a large percentage of whom must have special knowledge in the fields of medicine, particularly diseases of the lungs and neuropsychiatry".

This recommendation of the director has the support of the medical council of the bureau and the ex-service men's organization. It is believed that President Coolidge approves the plan of creating this medical corps in the bureau, and it is probable that legislation proposed in congress, on the subject of the United States Veterans' Bureau, will include this provision.

The most important addition to the medical service of the Veterans' Bureau is stated by Director Hines to be the creation of the medical council. The function and purposes of this council are for the elevation of the character of medical service of the bureau. The council consists of physicians, and experts of national prominence, who are specialists in tuberculosis, neuropsychiatry, internal medicine, surgery, hospital administration and medical research. Stated meetings are held quarterly with the medical director and staff for the consideration of medical problems of the bureau. Members of the medical council visit the hospitals and various offices of the bureau throughout the country for the purpose of improving the service and administration of the medical corps. As a result of the activities

of the medical council, a section on medical research was established. The functions of this section are to study available medical data by which the results accomplished by the bureau might be measured, investigation of the character of clinical work, and the promotion and encouragement of research work. The establishment of two diagnostic centers for the study of cases presenting difficulties of diagnosis, or which are the subject of medical controversy, is also the result of the recommendations of the medical council. These diagnostic centers are at the Cincinnati General Hospital and the United States Veterans' Hospital No 32, Washington, D. C.—Journal A. M. A.

THE VETERANS' BUREAU

It is clear that Gen. Frank T. Hines of the Veterans' Bureau, has the welfare of disabled soldiers well in mind. It is also clear that if better medical service is to be obtained, a more liberal policy must be employed to render the service attractive. It is not enough that the government furnish fine buildings and good living conditions, but also furnish the best medical management and treatment. It is not fair to the disabled veterans to provide a medical corps made up in any considerable degree of derelict medical practitioners, but of highly trained men having a special fitness for this particular service. The character of the men employed in this service should equal that of the men employed in the regular army and navy. The salaries are much smaller than the earnings of trained physicians in civil life, but this disparity may be in part made up by rank and retirement pay. Even in the army and navy there are many vacancies, which promise to increase. There will certainly be a serious shortage in the government medical service unless more liberal policies are adopted. It is not desirable to reduce the quality of the medical men employed, but something must be done to equal the difference between the incomes and emoluments of medical men in private practice and those in the government service. This is particularly true of the Veterans' Bureau. In this service the present salaries are not so much a handicap as the conditions of service. We feel quite sure that if the conditions of service were the same as in the army and navy, there would be no great difficulty in securing competent medical men.

To maintain a high order of service, the suggestions of Gen. Hines in his recommendations will be efficient. We are convinced that present conditions are not good, but may be made so by a liberal policy. There is now no incentive for medical men to do their best. The appointment of consulting staffs are no doubt helpful, but the regular staffs on constant duty should be experts in their respective services. —Editor.

IS THE PITUITARY ESSENTIAL TO LIFE?

The Journal of the American Medical Association for January 2nd considers editorially the question of the relation of the pituitary to life. There appears to be some difference of opinion among physiologists and surgeons as to whether this gland is essential to life. Later surgeons, including Dandy and Reichert of Baltimore, think it is not. The arguments presented are as follows:

Information regarding the actual functions of the pituitary gland is singularly conflicting. In few domains of physiology are equally contradictory data supplied by investigators of scientific repute. Contrary to the earlier students of the subject, Paulesco maintained the thesis that the hypophysis is necessary to life. His conclusions were based on the outcome of surgical extirpation of the pituitary and were subsequently supported by the independent observations of a number of experienced investigators, including Cushing and his co-workers in this country. It might be assumed that the failure to produce fatal conditions through hypophysectomy have been due to incomplete operations; yet postmortem examinations have left no warrant for such a conclusion. An explanation of the divergent results appear to have been furnished by Dandy and Reichert of the department of surgery of the Johns Hopkins Hospital. They point out that, as an organ well secluded at the base of the brain and skull and attached to both at the central point, the hypophysis has offered great difficulties of operative approach preparatory to its extirpation. It seems likely, therefore, that for the seemingly paradoxical results now on record the operative procedure itself must be held responsible. Cerebral trauma is not easily averted. Lassitude, drowsiness and even coma, as well as convulsions, are occasional complications of human intracranial operations; and it has been precisely such symptoms that have attended the experimental hypophysectomies which have had a fatal outcome. Dandy and Reichert have perfected an operative technic that permits the safe removal of the hypophysis in dogs, the species about which the controversies have revolved. With their procedure the Baltimore surgeons have, as they expressed it, found no evidence to support, and every evidence to refute, the assumption that the hypophysis is essential to life, or that the group of symptoms described by others as preceding death in hypophysectomized animals is of hypophysial origin.

THE PASSING OF SECTARIAN MEDICINE

The Boston Medical and Surgical Journal of December 24th refers to some interesting facts in relation to sectarian medicine which caused much anxiety and grief to physicians of the "regular school" fifty years ago, which has now passed into history and forgotten to all except the older physicians.

Fifty years ago seven fellows of the Massachusetts Medical Society were expelled from the Society because they espoused the cause of Homeopathy. It is difficult today to understand the bitterness of feeling which then prevailed. There is no reason to question the honesty or sincerity of purpose of those who took part on either side in what occurred. Of the seven fellows then expelled, one alone survives, Dr. Herbert Codman Clapp of Brookline, emeritus professor of diseases of the chest of the Boston University School of Medicine, consultant of the Massachusetts Homeopathic Hospital, and for ten years physician to the Rutland State Sanitorium, has again become a fellow of the Massachusetts Medical Society. The door is open to all physicians of high character and adequate training to enter this great Society. The era of sectarianism in medicine is passed.

Iowa Falls, Iowa, February 3, 1926.

Dear Dr. Fairchild:

My liquor permit has been revoked by the prohibition administrator under circumstances which I believe will be of interest to every member of the Iowa State Medical Society who has a permit.

The evidence is briefly as follows: I furnished a bonafide patient a total of a little less than three and one-half ounces of alcohol in eight ounces of mixture containing sugar. This patient came to me after an extended spree, said he was broke and hence was cut off from his supply. The alcohol in question was furnished in decreasing amounts to taper him off—a treatment recognized by the profession and suggested by Alexander Lambert in Nelson's Loose Leaf Medicine. Diluted alcohol was used in this instance because it was the only alcoholic available at that time. The Iowa Falls pharmacies do not have permits.

My permit was not revoked for technical violation but because "you have not in good faith complied", etc. Hence it is a direct stigma upon my integrity and good name. I presented argument and asked for a review of the law and evidence in the case and was overruled, although the government made no effort to show bad faith on the part of the permittee except that the intoxicating liquor was furnished. The administrator advises that my only remedy is mandamus proceedings in federal court. If I win there no doubt the treasury department will carry the issue to the supreme court; which I presume is beyond my financial ability.

If this position is tenable, what physician dare furnish intoxicating liquor to a patient under any circumstances? This seems to me to be an attempt of the treasury department to directly control the practice of medicine which the United States Supreme Court has already decreed they have no power to do. Will the legal department of the Iowa State Medical Society defend me in this action? If so I shall be glad to forward complete transcript and other data.

Thanking you kindly for your consideration, I remain.

Yours very fraternally,

Dr.....

February 5, 1926.

Dear Doctor:

Replying to your letter of February 3rd, I have to say, that in cases like the one you submit to us, we are limited to an advisory function.

The Committee on Medical Defense was organized primarily for malpractice defense, but have extended its functions to advice and legal opinion in questions that affect the welfare and safety of the profession. The question submitted in your letter is not a defense of your property, your liberty or good name, but your alleged rights under the prohibition law; the right to prescribe alcoholics. We cannot act for you in restoring the rights you have been deprived of by alleged unfair means; we can only advise you.

If there are any points upon which you desire an opinion or advice from a legal point of view, we will submit it to Mr. Dutcher. The fact that there is a material difference of opinion as to the value of alcohol in the practice of medicine, the law and the sentiment would suggest that the whole matter be dropped.

Yours truly,

Dr. D. S. Fairchild.

February 8, 1926.

D. S. Fairchild, M.D.,
Clinton, Iowa.

Dear Doctor:

I received this morning an envelope from your office containing copy of letter from Dr....., addressed to you under date of February 3, 1926, and your answer thereto under date of February 5. I note what you say in your answer, and I think you are taking the right attitude. I assume there is nothing for me to do in the matter until there shall be some further request.

Yours very truly,

C. M. Dutcher.

Menlo, Iowa, January 16, 1926.

Dear Doctor:

Was just looking over Journal and on Page 50, "Story County Medical Society" by Dr. F. S. Smith, brought to mind an experience I had July 9, 1925, with this same "leather nosed bird". He told me same story in regard to sick child, and as I dispense, I furnished the medicine and in payment he presented a check for $7.50 drawn on a man I knew quite well.

I cashed his check giving him $6.50 in change. He went from my office to drug store and made $3 purchase and presented a $10 check drawn same as the one presented to me. The checks were bogus, which we learned ten days later. I do not believe him to be a stool pigeon, but a grafter. The sheriff of Guthrie county has a warrant for him sworn out by Dr. Wiley who was at Casey at that time. He engaged Dr. Wiley and myself to attend his wife in confinement which was to have been July 28. He worked Atlantic M.D.'s and druggists, also Greenfield, Casey and here.

I think the Journal would do well to put the subscribers wise and in that way he may be picked up, not that I expect to recover my $6.50 and medicine, but to save others the same experience. He also told me about having been discharged from Rochester as incurable and wanted morphine, which I did not furnish. I think in case he does not get narcotics, he gets cash to pay the next fellow who will be sympathetic and come across.

Fraternally,

V. T. Lindsay.

LAW ENFORCEMENT IN RELATION TO THE HARRISON NARCOTIC ACT

The Journal of the American Medical Association presents some interesting information editorially. It appears that the collector of internal revenue at Nashville refused to register under the Harrison Narcotic Act twenty-five physicians who were under indictment for alleged violations of it.

"In 1922 a court of competent jurisdiction decided that a collector had no right to refuse registration under such circumstances, and the Bureau of Internal Revenue took no appeal from that decision. At that time the United States District Court for the northern district of Georgia thus disposed of the collector's claims:

"'But to prohibit a practicing physician from prescribing narcotics unless he registers, and then to refuse to register him, would, to that extent, be to prohibit and regulate his practice of medicine, a thing within the province of the state, and not the United States, and in contradiction with the purpose of the act. * * * The determination of who may practice medicine or otherwise dispense drugs belongs to the agencies of the state. The collector must register on proper application all who are by the state law permitted to dispense them. He has no discretion in the matter.'

"In the present instance, the United States District Court of Nashville promptly arrived at a similar conclusion and directed the collector to register the Tennessee physicians. For the trouble, expense and undesirable publicity incident to the court proceedings, however, these physicians have no redress. Available reports do not disclose the nature of the offenses with which they were charged, the character of the evidence on which they were indicted or their professional standing. Their guilt or innocence can and should be promptly settled in an orderly course of judicial procedure. If they are convicted, lawful penalties can be enforced. But as was made perfectly clear by the court in the Stearnes case cited, and as should have been known to the collector of internal revenue at Nashville, these matters have nothing to do with registration under the Harrison Narcotic Act. Referring to an order issued by the commissioner of internal revenue to withhold registration from indicted or convicted persons, in that case the court said:

"'The instruction of July 26, 1921, was not made by "the commissioner of internal revenue with the approval of the secretary of the treasury", and so (was) not authorized by the act; but, if it were, in attempting to make a pending charge of crime a ground for refusing registration, it would be unsustainable. Even after the conviction, to do so would add a deprivation of vocation to the punishment fixed by law. Prior to conviction there is only an accusation of which the registrant is presumed to be innocent.'

"The decisions of the courts in the Georgia and Tennessee cases do not leave collectors of internal revenue helpless. They merely refer them back from lawless methods to lawful ones. If a collector has evidence that a physician has violated the Harrison Narcotic Act or the narcotic act of any state, he can institute prosecution in the proper federal or state courts. If the collector has evidence that a physician is unfit to practice medicine, he can file complaint with the licensing board of the state by which that physician was licensed. If the collector regards these measures as inadequate, he can appeal through proper channels to the proper legislative bodies to amend or supplement the Harrison Narcotic Act or the medical practice or narcotic acts of the state.

"The law, however, does not authorize a collector to use his own judgment to remedy what he may regard as defects in federal or state legislation. Such a procedure is not merely a trespass on the rights of the physician; it is an attempt unlawfully to infringe on the constitutional rights of the state itself. Such occurrences tend to break down the harmonious relations between the federal government and the states and to increase the odium already attached to the word 'bureaucracy'. The Harrison Act penalizes the physician who fails to conform; what redress does it offer when he loses time, money and professional standing through the misguided autocratic methods of those whom the government selects to enforce it?"

THE PHYSICIANS' HOME, INC.

The campaign to establish an endowment fund for The Physicians' Home, the first small unit of which is already in service at Caneadea, New York, was launched Monday, November 23, at the Waldorf-Astoria, New York City. An impressive gathering that included men and women prominent in medicine, financial and other fields heard noted speakers out-

line the purpose of the campaign and laud the movement. A number of substantial donations were received indicating the interest of the profession and the public.

The following were speakers: United States Senator Royal S. Copeland, M.D.; Dr. William H. Dieffenbach; Congressman John J. Kindred, M.D.; Don C. Seitz, of the New York World; Samuel Untermyer; Dr. Walter P. Bowers, editor, Boston Medical and Surgical Journal; Rabbi Israel Goldstein, representing the New York Board of Jewish Ministry.

Dr. Morris, president of the Home, said: "None of the doctors are to be subjected to institutional methods. They will be free to come and go as they please. Those who have nothing will pay nothing. Those who can afford to pay for part or all of their care (and there are many such) will be allowed to do that.

"The directors of The Physicians' Home are all busy men actively engaged in professional work and receiving no compensation for their time and labor, willingly expended in this charity, the need for which has been brought so strongly to their attention. They feel that it is time, in the larger development of the institution to secure an endowment which will allow them to transfer the responsibilities to men who are trained in social service relating to institutions."

Campaign headquarters have been established in the Times building, Times Square, New York. Contributions should be forwarded to that address, in care of the treasurer, Albert G. Weed, M.D. Other officers and directors are Robert T. Morris, M.D., president; William H. Dieffenbach, M.D., vice-president; Silas F. Hallock, M.D., secretary, and Drs. Warren Coleman, Max Einhorn, Wolff Freudenthal, J. Richard Kevin, Stephen V. Mountain and Ralph Waldo, directors.

It was disclosed at the inaugural banquet that of the more than 140,000 physicians in the United States approximately 5 per cent are incapacitated. It is these the Home seeks to serve.

COMMISSION ON MEDICAL EDUCATION, ORGANIZATION AND FIRST MEETING

The new Commission on Medical Education had its first meeting at the Statler Hotel, Buffalo, New York, on Monday, October 19, 1925. The following members being present:

Dr. A. Lawrence Lowell, president of Harvard University.

Dr. Ray Lyman Wilbur, president of Leland Stanford University.

Dr. Walter A. Jessup, president of University of Iowa.

Dr. Samuel P. Capen, chancellor University of Buffalo.

Sir Robert A. Falconer, president University of Toronto.

Dr. Henry Gordon Gale, dean Ogden Graduate School University of Chicago.

Dr. Walter L. Bierring, Des Moines, Iowa, National Board of Medical Examiners.

Dr. Hugh Cabot, dean University of Michigan Medical School, Association of American Medical Colleges.

Dr. Wm. A. Pusey, Chicago, Illinois, American Medical Association.

Dr. Olin West, Chicago, Illinois, American Medical Association.

Dr. William Darrach, dean College of Physicians and Surgeons, Columbia University, New York.

Dr. Thomas S. McDavitt, St. Paul, Minnesota, Federation of State Medical Boards.

Professor Lafayette B. Mendel, Yale University, American Association for the Advancement of Science.

Dr. David L. Edsall, dean Harvard Medical School.

Dr. George Blumer, New Haven, Connecticut, Association of American Physicians.

Dr. Hans Zinsser, Boston, Massachusetts, American Public Health Association.

The commission was established under the auspices of the Association of American Medical Colleges, and this first meeting was called to order by Dr. Hugh Cabot, the president of the association. In his opening remarks, he stated that the purpose of the association had now been accomplished—and its connection with the commission had terminated. The organization of the commission was then completed by the election of President A. Lawrence Lowell of Harvard University as chairman, and Dr. Willard C. Rappleye, formerly superintendent of New Haven (Yale University) Hospital, as secretary and director of the survey. Dr. Fred C. Zapffe of Chicago was named the treasurer of the commission.

Dr. Rappleye presented a report of the resources made available through the assistance of the several educational agencies, which permitted a comprehensive survey of medical education being carried out for a period of five years. The director will devote his entire time to the work.

While this meeting was largely concerned with preliminary matters, there was a general discussion of the problems to be studied, and the best means of approaching the same.

It was definitely decided that the following phases of the problem should receive primary consideration:

1. What is demanded of the general practitioner.
2. What the public demands of the physician.
3. The past record of successful practitioners.
4. The selection of medical students.

Under the supervision of the director, special committees will collect all possible data and information which will be considered at subsequent meetings, and the results of the study will be published from time to time.

The commission is fortunate in the selection of its director, Dr. Rappleye. By reason of his wide experience and knowledge of hospital conditions in this country, he is in a position to properly estimate the influence of changing economic conditions on medical practice of today and tomorrow.

The personnel of the commission and the deep interest manifested by each member in the work at hand augured well for the success of this movement.

State licensing boards as well as medical schools will watch with sympathetic interest the efforts of the commission to accomplish the purpose for which it was organized.

QUACKERY WITHIN OUR PROFESSION

There is an old saying that when you live in glass houses you should not throw stones, and it is in a measure appropriate in connection with the effort on the part of the medical profession to secure deserved recognition of the aims and achievements of scientific medicine and abolition of the publicity that makes nostrums and quackery thrive. A very large percentage of the regular medical profession is both progressive and ethical, but there is an element within our profession that represents quackery and dishonesty which little effort on the part of the profession has been put forth to abolish. Some of the quackery and deception practiced by supposedly reputable members of the medical profession is of that refined and polished type that is hard to detect by the average observer. Some of it is blatant and crooked, with no attempt to gloss it over, and our profession suffers by harboring within its ranks these men who disgrace us. It is true that the medical profession is as free of undesirable members as any other profession or the followers of any vocation that is organized, but that does not lessen the duty that we owe to ourselves and to our profession to improve conditions by disciplining and penalizing those who do not live up to the rules of conduct which we have established as our guide. In Indiana we have knowledge of quackery within the ranks of our medical societies, and no effort is made to suppress it. Probably every county medical society harbors within its ranks one or more very undesirable members whose conduct is a disgrace to the society. Like a drop of ink in a pail of clear water these few black sheep hurt the whole medical profession. The only reason that they are tolerated in the ranks of reputable medical men is because no one seems to have the nerve to take the initiative in bringing the offenders to justice. We have in mind the abortionists, the advertisers of so-called "cures" for tuberculosis, cancer and other diseases, and the notorious commercialists in the profession. In every locality where the profession has taken a firm stand in purging its ranks of offenders against the ethics and integrity of the medical profession the standing of the profession in that community has been elevated to the point where the public places implicit confidence in the profession and aids in the maintenance of the highest traditions of medical practice. On the other hand, in those communities where the medical profession as a profession dishonors the ethics and propriety of medical practice, the public generally is suspicious and has little faith in the trustworthiness of the medical men of that community. All of which leads us to suggest that it would be a good thing if every county medical society would open each meeting, or certainly several meetings during the year, by reading the "Principles of Ethics" which have been adopted by every reputable medical society as a guide but which so seldom are lived up to in letter and spirit. Aside from our conduct in a professional way there also is to be considered our conduct outside of the profession.

—Jour. Ind. State Med. Ass'n.

DR. HEDBLOM APPOINTED PROFESSOR OF SURGERY AT ILLINOIS

The board of regents of the University of Wisconsin announced, December 2, the resignation of Dr. Carl Hedblom, who has been professor of surgery in that institution since June, 1924. Dr. Hedblom has been appointed professor of surgery at the University of Illinois College of Medicine, Chicago, and will take up his duties February 1, 1926.

Dr. Hedblom is a graduate of Colorado College (B.A.), Harvard University (M.D.), and the University of Minnesota (Ph.D.); he was an intern in the Massachusetts General Hospital, Boston; professor of surgery in the Harvard Medical School of China from 1913 to 1916; appointed head of the section on general thoracic surgery at the Mayo Foundation in 1919 and was assistant professor of surgery in the University of Minnesota.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination.

Medical Officers

Applications for medical officer positions will be received until June 30. The examinations are to fill vacancies in the Indian Service, the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Veterans' Bureau, and other branches.

The examinations are of five grades: Junior medical officer, assistant medical officer, associate medical officer, medical officer, and senior medical officer.

For the Departmental Service at Washington, the entrance salaries range from $1,860 a year for the junior grade to $5,200 a year for the senior grade. Juniors may be promoted to $2,400 and seniors may be promoted to $6,000 after the six months' period of probation. Higher-salaried positions may be filled through promotion in accordance with the civil service rules. Promotion from grade to grade may also be made in accordance with the civil service rules as vacancies occur. For field branches the salaries are approximately the same except that deductions are made where quarters and subsistence are furnished and where part-time duty, only, is required.

Eligibles are needed who are qualified in general medicine and surgery. There is especial need for eligibles qualified in the various specialties. Practically any specialty may be named by the applicant.

Competitors will not be required to report for examination at any place, but will be rated on their education and training weighted at 30 per cent, and their experience weighted at 70 per cent. On account of the needs of the service, papers will be rated currently as they are received and certifications will be made as the needs of the service require.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the postoffice or custom house, any city.

ANNUAL MEDICAL CLINIC

The annual Medical Clinic of the College of Medicine of the State University of Iowa will be held on Tuesday and Wednesday, April 13 and 14, 1926. All physicians in the state are invited to attend, and a large gathering is anticipated. Dr. William Jepson of Sioux City, Dr. Walter Bierring of Des Moines, and Dr. James Guthrie of Dubuque, will be present as guests of the association.

Dr. Campbell Howard, formerly professor of theory and practice of medicine, State University of Iowa, now at McGill University, Montreal, Canada; and Dr. McKim Marriott, professor of pediatrics at Washington University, St. Louis, will conduct the clinic.

W. W. KEEN

Dr. William Williams Keen of Philadelphia, celebrated his eighty-ninth birthday, January 19, still in good health and active. Dr. Keen has been in the practice of medicine sixty-four years. Served in the Civil War and the World War, as a medical officer. In the World War was a major in the Medical Reserve Corps of the United States Army and in 1918 wrote a valuable book on the Treatment of War Wounds, Selection, Papers and Addresses in 1922. At the first meeting of the International Surgical Congress, after the war closed, presided over the Association in Paris (1920).

Most of the great advances in surgery have grown up under his eye; anesthesia was in its infancy; the fever thermometer was unknown; antiseptic and aseptic surgery had not been thought of, and the great expansion of surgical undertakings were waiting. To have followed the advances in medicine and surgery for the past sixty-four years with a mind, active and alert, always at the front in evaluating progress must be a satisfaction difficult to estimate and which falls to few.

SOCIETY PROCEEDINGS

Blackhawk County Medical Society

Dr. G. G. Bickley of Waterloo was chosen president of the Blackhawk County Medical Society at the meeting of the organization held January 6 in Black's tea room, Waterloo. He succeeds Dr. E. C. McMillan of Hudson.

The other officers who were elected are as follows: Dr. R. W. Allen of Jesup, vice-president; Dr. A. J. Joynt, Waterloo, secretary; Dr. F. C. Sage, Waterloo, treasurer; Dr. E. C. McMillan, Hudson, censor; Dr. W. L. Hearst, Cedar Falls, delegate to the state convention; Dr. T. F. Thornton, Waterloo, alternate.

Dr. George E. Brown of the Mayo Clinic at Rochester, Minnesota, gave the principal talk of the evening giving a survey of the Cardiovascular Diseases and reviewing the recent developments that have been taking place in the diagnosis and treatment of these diseases.

He also touched on the operative treatment brought out by Dr. A. W. Adson of the Mayo Clinic, for the treatment of certain types of vascular disturbances to the feet, bringing out the point that by this method, Raynauds, a disease of the foot, which hitherto was considered as uncurable had been successfully treated by this new method.—Waterloo Tribune.

Decatur County Medical Society

The Decatur County Medical Society held a meeting at the office of Dr. B. L. Eiker in Leon Thursday evening, December 17. The attendance was good.

Dr. John C. Parsons of Creston, addressed the meeting upon Prevention and Early Recognition of Heart Diseases. Dr. Parsons has given much study to diseases of the heart. Dr. W. S. DeLong of Tingley spoke upon The Comparison of Sick and Healthy Children. Following the completion of the evening program lunch was served at the Gardner Cafe.

Des Moines County Medical Society

On January 12 the Des Moines County Medical Society held their regular monthly dinner and meeting at the Hotel Burlington. Dr. J. C. McKitterick read a paper on A Resume of the Modern Methods of Infant Feeding; Guy E. Thode, D.D.S., presented a paper on The Relation of Diet to the Formation of Teeth, and Dr. J. S. Cooper gave a very interesting talk on Cesarean Section. About forty local men and visitors attended this meeting. On February 9 the society will dine at the Hotel Burlington and enjoy the following program: a talk on The Relation of the Iowa State Medical Library to the Practitioners of the State, by Miss Frances B. van Zandt, and a paper on Practical Points of Proctology, by Dr. Charles J. Drueck, of Chicago. On March 9 Dr. Ernest Sachs of St. Louis will hold a clinic on Brain Lesions, and in the evening will discuss the subject of Brain Injuries. On the evening of April

13 Dr. E. H. Skinner will address the medical society on The Recognition and Management of Malignancy of the Uterus. It is contemplated on the noon of April 13 to hold a public meeting under the auspices of the Burlington Lions Club and have Doctor Skinner give a discussion on cancer that can be understood by laymen.

All medical men will be welcome who care to attend these meetings. The Des Moines County Medical Society meets at 6:30 p. m. at the Hotel Burlington for dinner and program the second Tuesday of each month.

H. R. Peoples, Sec'y.

February 9, 1926

Tuesday, February 9, the Des Moines County Medical Society held their regular monthly meeting at the Hotel Burlington. The program was opened at 4 p. m. with a talk by Miss Frances B. van Zandt, state librarian, Des Moines, Iowa. She explained the usages of the library and the service that it could render to physicians of the state. She aroused a great deal of enthusiasm for the library and created a desire on the part of the physicians present to work for an increase in appropriations for the library in order that the present service may be maintained.

The second speaker was Dr. Charles J. Drueck, professor of rectal diseases in the Chicago Post-Graduate Medical School. He spoke on Practical Points of Proctology. It was an exceptionally interesting and instructive talk and was profusely illustrated with lantern slides.

Dinner was served at 6:30 p. m. and the society was greatly honored in having as its guest Dr. Wilfred T. Grenfell of Labrador, who made a short talk after dinner. Later in the evening a number of the members went in a body to the First Methodist Church of Burlington to listen to Doctor Grenfell's lecture on his work.

The meeting was exceptionally well attended. Invitations had been issued to members of the local dental and nursing professions to attend the meeting especially to hear Miss van Zandt. There were several dentists present and about thirty nurses besides about thirty-five physicians. There were physicians present from Ft. Madison, New London and Mediapolis, Iowa, and Biggsville, Dallas City and Stronghurst, Illinois.

The next regular monthly meeting will be held at the Hotel Burlington on the evening of March 9. Dr. Ernest Sachs, clinical professor of neurological surgery, Washington University, St. Louis, Missouri, will be the chief speaker. His subject will be Brain Injuries.

On April 13 Dr. Edward H. Skinner of Kansas City will be the principal speaker before the medical society. Doctor Skinner has been prevailed upon to talk before three other organizations in the city on the subject of cancer. In the forenoon he will address the high school assembly; at noon he will speak before a union meeting of the service clubs of the city, including the Rotary, Kiwanis, ABC Clubs and Lions, the luncheon meeting being sponsored by the Lions; and in the afternoon he will talk to a group of nurses. It is on this day that the Des Moines County Medical Society will endeavor to impress on the public the formidable nature of cancer.

H. R. Peoples, Sec'y.

Polk County Medical Society

The Polk County Medical Society met for its monthly meeting in the Oak Room of the Fort Des Moines Hotel, on January 26, 1926. The meeting was called to order by the president, Dr. Thos. A. Burcham.

The reading of the minutes was postponed until after the program.

Program

Informing the Public—Morris Fishbein, M.D., Editor A. M. A. Journal, Chicago.

In Memoriam—Dr. Gershom Hill: D. S. Fairchild, M.D.

In Memoriam—Dr. J. T. Priestley: W. L. Bierring, M.D., Lewis Schooler, M.D. and W. W. Pearson, M.D.

The resolutions on the death of Dr. Priestley were read by Dr. Bierring, who moved the adoption of the same. Motion seconded and unanimously carried.

The resolutions on the death of Dr. Hill were read by Dr. Ely, who moved the adoption of the same. Motion seconded and unanimously carried.

The report of the committee appointed to audit the secretary's and treasurer's books for the year 1925, was read by Dr. M. L. Turner who moved the adoption of the same. Motion was duly seconded and unanimously carried.

The secretary presented the application of Dr. M. A. Royal for membership which was referred to the board of censors.

The president then announced that nominations were in order for two delegates for the next annual meeting of the Iowa State Medical Society to take the place of Dr. Burcham and Dr. McKinley, whose terms had expired. Dr. Bierring moved that the rules be suspended and the secretary cast an unanimous vote, that Dr. Burcham and Dr. McKinley be elected delegates to succeed themselves. Motion seconded and unanimously carried.

It was moved and carried that a special meeting of the society be held on February 10 to hear a paper on Management of Burns, by Dr. Davidson of the Henry Ford Hospital, Detroit, Michigan.

The president appointed Drs. Fenton and Meredith to serve on the committee of arrangements for the next meeting of the Iowa State Medical Society in accordance with the by-laws of the State Society.

A letter of appreciation from Mrs. Gershom Hill and Dr. Julia Hill was read by the secretary.

Ninety-two members and seven visitors were present at the meeting.

L. K. Meredith, Sec'y-Treas.

Medical Society of the Missouri Valley

The thirty-eighth annual meeting was held at Hotel Robidoux, St. Joseph, Missouri, September 30, October 1 and 2, under presidency of Dr. John W. Martin, of Des Moines, Iowa. The program was a happy combination of hospital and diagnostic clinics, symposia on internal secretions, fractures and diseases of the heart. At the evening session various interesting subjects were presented by the guests of the society, among whom were Drs. D. T. Dunott, of Baltimore; V. J. O'Conor, S. R. Slaymaker, Robert H. Babcock, Karl Meyer, B. F. Lounsbury, of Chicago; Dr. Walter M. Boothby, Rochester, Minnesota, and Drs. Russell Weingart and Connell of Des Moines, Iowa.

The following officers were elected for the ensuing year: A. D. Dunn, M.D., president, Omaha, Nebraska; H. W. Carle, M.D., vice-president, St. Joseph, Missouri; M. A. Tinley, M.D., second vice-president, Council Bluffs, Iowa; Charles Wood Fassett, M.D., secretary, Kansas City, Missouri; Oliver C. Gebhart, M.D., treasurer, St. Joseph, Missouri.

Dr. A. D. Dann has announced the program committee for the next meeting, consisting of the following members: Dr. John Walter Martin, chairman, Des Moines, Iowa; Dr. J. W. Mayhew, Lincoln, Nebraska; Dr. John E. Summers, Omaha, Nebraska; Dr. Donald Macrea, Council Bluffs, Iowa; Charles W. Green, Ph.D., Columbia, Missouri; Dr. E. H. Skinner, Kansas City, Missouri; Dr. John M. Bell, St. Joseph, Missouri; Dr. T. G. Orr, Kansas City, Missouri; Dr. P. T. Bohan, Kansas City, Missouri; Dr. Granville N. Ryan, Des Moines, Iowa.

It is announced that the next session will be held jointly in Council Bluffs and Omaha, with hotel quarters at the Fontenelle, Omaha. The date will probably be September 15, 16, 17. On Wednesday and Friday the sessions will be held in Omaha, and Thursday will be clinic day in Council Bluffs, in charge of Dr. Donald Macrea.

The Wichita Meeting of Western Surgical Association

At a meeting of the Western Surgical Association, Wichita, Kansas, December 18-19, 1925, Dr. Robert C. Coffey, Portland, Oregon, was elected president; Drs. Neil J. McLean, Winnipeg, Canada, and Vilray P. Blair, St. Louis, vice-presidents; Dr. Harry P. Ritchie, St. Paul, secretary, and Dr. Frank R. Teachner, Kansas City, Missouri, treasurer. The next meeting will be in Duluth, Minnesota, probably late in September.

Twelve new members were elected at this meeting. Dr. Hubert A. Royster, Raleigh, North Carolina, was elected president of the Southern Surgical Association at the meeting in Louisville, Kentucky, December 17, 1925; Drs. Louis Frank, Louisville, and Frank K. Boland, Atlanta, Georgia, vice-presidents, and Dr. Robert L. Payne, Norfolk, Virginia, secretary. Dr. Royster has been secretary of the association for nine years. The next meeting of the association will be at Boloxi, Mississippi.

Sioux Valley Eye and Ear Academy

Program of the twenty-fifth semi-annual session Sioux Valley Eye and Ear Academy, joint meeting with Kansas City Eye, Ear, Nose and Throat Society, held February 10, 1926, at Hotel Fontenelle, Omaha, Nebraska.

Morning Session, University of Nebraska Hospital
9 a. m.

Operative Clinics

Plastic Surgery of the Eye, Dr. John Wheeler, New York City.

Plastic Surgery of the Throat, Dr. Thos. E. Carmody, Denver, Colorado.

Dry Clinics

Dr. Gordon B. New, Rochester, Minnesota.

Demonstrations of the Slit-Lamp with Patients, Dr. C. S. O'Brien, Iowa City, Iowa.

Demonstration of the Audiometer with patients.

Afternoon Session, St. Joseph's Hospital, 1:30 p. m.

Operative Clinics

Plastic Surgery of the Eye and Surgery of the Throat, Dr. John Wheeler and Dr. Thos. E. Carmody.

Demonstration of Newer Methods of Physiotherapy, Dr. John L. Meyers and Dr. Theo. Blakesly, Kansas City, Missouri.

Discussion by Dr. A. B. Tyler, Omaha, Nebraska.

Dry Clinics by Drs. New and O'Brien.

Joint Banquet with Mid-West Section of the Triological Society, 6:00 P. M., at Hotel Fontenelle.

Officers of the Society—President, Dr. L. B. Bushman, Omaha, Nebraska; vice-president, Dr. Fred Bailey, Cedar Rapids, Iowa; secretary-treasurer, Dr. F. H. Roost, Sioux City, Iowa. Board of censors: Dr. J. A. Hohf, Yankton, South Dakota; Dr. L. R. Tripp, Sioux City, Iowa, and Dr. J. J. Hompes, Lincoln, Nebraska.

Health Convention Iowa Tuberculosis Association

The Health Convention of the Iowa Tuberculosis Association, Iowa Sanatorium Association, Iowa Heart Association and Iowa Trudeau Society was held at Perry, Iowa, February 18, 19, 1926.

Program

Thursday, February 18

9:00 A. M.—Registration, Pattee Hotel.

10:00 A. M.—Dr. Don M. Griswold, State Health Commissioner, The Relation of Official and Voluntary Health Work. Agnes H. Conway, Davenport, Halting Tuberculosis Where the West Begins. Elizabeth Healy, Ft. Dodge, Nutrition. Discussion, Superintendent L. E. Castle, Stuart. Agnes M. E. Hoffman, Grundy Center, Nursing Records. Jessie Jones, Atlantic, Extra-Curricular Activities.

12:30 Luncheon—Mrs. H. E. Humphreys, Union, The Hardin County Essay Contest. Mrs. D. Pirie Beyea, New York, Iowa's Inspiration. Dr. E. H. Lauer, Director Extension Division, Iowa City, Nurses I Have Met.

2:00 P. M.—Fred Hermann, Manchester, Publicity Secrets. Esther Wick, R. N., Newton, Health Pub-

licity. Discussion led by Julia W. Jackson, R. N., Ft. Dodge. Miss B. L. Swalwell, head of health education department, Iowa State Teachers College, Teaching Teachers to Teach Health. Margaret Biggerstaff, director occupational therapy, Healing by Work. Illustrated by O. T. products.

6:00 P. M.—Dinner. Dr. John H. Peck, presiding. Royal Holbrook, Ames, with his famous Iowa address. H. M. Cass, Huron, South Dakota, Stunts. Mrs. Ethel Tye, Orange City, Musical Readings. Health Songs by the crowd led by Talbot Macrae, Iowa State College.

9:00 P. M.—Social Entertainment.

Friday, February 19

9:00 A. M.—Dr. Merrill M. Myers, Des Moines, and Dr. John H. Peck, subject to be announced later. Dr. Ben C. Hamilton, Jefferson, Periodic Chest Clinics. Katherine Farmer, R. N., Monticello, The Need of Both Public Health Nurse and Social Worker in a County.

11:00 A. M.—Business meeting and elections.

12:30—General Luncheon—F. D. Preston, Executive Secretary, Omaha Community Chest. Maurice Willows, Chicago, National Playground and Recreation Association. Rev. C. N. Bigelow, Adel.

12:30—Medical Luncheon. Auspices of the Iowa Trudeau Society and the Iowa Heart Association, Dr. J. W. Kime, presiding.

1:00 P. M.—Chest Clinic, Drs. Peck and Myers.

2:00 P. M.—Dr. Walter L. Bierring, Des Moines, Your Work as Viewed by a Physician. Mrs. R. M. Moehn, Carroll, Using the Funds—A County Health Program. General discussion.

3:15—One act drama, starring Frances Brophy.

3:30—Seal Sale Round Table.

6:00 P. M.—Dinner meeting of Iowa Sanatorium Association at Broadlawns, Des Moines. Discussion of occupational therapy and exhibits.

American Triological Society

The Middle Section of the American Triological Society held its mid-year meeting in Iowa City February 9, 1926. One hundred and sixty members registered, which is the largest section meeting of the society ever held.

Municipal Health Body

A preliminary meeting of health officers was held for the purpose of organizing a Municipal Health Association.

Those present were: Dr. Don M. Griswold, Iowa health commissioner; F. F. Suchomel and A. Flusty, Cedar Rapids; H. R. Sugg, Clinton, H. L. Sayler, Des Moines; D. C. Steelsmith, Dubuque; A. A. Schultz, Fort Dodge; A. L. Bryant, Muscatine; W. D. Hayes, Sioux City; C. W. Stewart, Washington; E. M. Williams, Oskaloosa; B. L. Gillfillan, Keokuk, and William Woodburn, Boone.

Officers elected: Dr. D. C. Steelsmith, president; Dr. A. L. Bryan, vice-president; Dr. H. L. Sayler, secretary.

Dean Clinical Society

The Dean Clinical Society, made up of former staff members of the department of head specialties of the hospital of the University of Iowa, met on February 8, 1926. These men are largely interested in the teaching of the head specialties in the various universities and medical schools.

Monday noon the group was entertained for luncheon at East Lawn.

Tuesday noon a luncheon meeting was held at the Memorial Union building. Dr. Walter Jessup, president of the University of Iowa, addressed the members of the society.

TWELFTH ANNUAL MEETING OF MEDICAL WOMEN'S NATIONAL ASSOCIATION

The twelfth annual meeting of the Medical Women's National Association will take place April 18 and 19, at Dallas, Texas, in conjunction with the American Medical Association meeting.

The headquarters of the M. W. N. A. are the Hotel Baker. Dr. May Agness Hopkins, Medical Arts building, Dallas, Texas, is the chairman of the committee on arrangements.

Women intending to go to this meeting should promptly make reservations either through Dr. Hopkins or directly at the Baker Hotel, as there will be a big crowd there. Hotel rates are reasonable, a double room with bath averaging $6.

The terms for railroad transportation should be looked up in the A. M. A. Journal, but in many places where there are large numbers of members of the Medical Women's National Association, special cars for the women may be run.

Medical women passing through New Orleans are specially invited to stop over there and will meet with a cordial welcome from the New Orleans medical women, represented by Dr. Elizabeth Bass, 3513 Prytania street, who is president of the Women Physicians of the Southern Medical Association.

The Texas women, cooperating with the chairman, Dr. Hopkins, are making most attractive arrangements for the meeting. All medical women, whether members of the M. W. N. A. or not, are most cordially invited to participate in this meeting.

ANNUAL MEETING OF THE BOARD OF GOVERNORS AND FELLOWS OF THE AMERICAN COLLEGE OF SURGEONS

In accordance with Article IV, Section 4, and Article III, Section 2, of the By-Laws, the annual meeting of the Board of Governors and the Fellows of the College was called for 2:30 o'clock on the afternoon of Thursday, October 29, 1925, in the ball room of the Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, for the transaction of routine and scientific business.

Franklin H. Martin,
Director-General.

BERLIN WELCOMES AMERICAN PHYSICIANS

Dr. D. S. Fairchild, Editor,
Journal of Iowa State Medical Society,
Clinton, Iowa.

We wish to call your attention to an article appearing in the Journal of the American Medical Association, January 16, Department of Foreign News under the title, "Berlin faculty decides against official welcome to American physicians", copied from a German medical journal dated December 11, 1925.

The reason given by the Faculty of the Berlin University for this action was on account of the exclusion of German physicians from taking part in International Medical Congresses.

There is no doubt that this was the attitude taken by the Faculty of Berlin last fall, but many things have transpired to strengthen our International relations since that time. The condition at the present time is entirely different.

The first of this month we received assurance from both the German Government and the Faculty of Berlin that the members of the Inter-State Post-Graduate Assemblies, who will visit Berlin, June 15, 16 and 17, will receive a most hearty welcome. These greetings were received following several months of discussion between the representatives of the German Government, the Faculty of the University and representatives of this Association, especially with Dr. Carl Beck, secretary of the foreign assemblies of this organization, who is now in Europe completing the final clinic arrangements for the 1926 assemblies.

The position taken by this organization was: First, that the same spirit of equality and justice enjoyed by the profession of other countries in their relations with one another should be extended to those of the German speaking countries.

Second, that this Association is not affiliated with or responsible for the acts of other medical organizations, therefore, we cannot sign any documents or declarations pertaining to other medical bodies.

Following the publication of the article above mentioned, we cabled Professor Bier, the chairman of the Berlin clinic committee of this Association, to give us a statement so that we could speak authoritatively. The following is a copy of Professor Bier's answer:

Berlin, January 21, 1926.

"William Peck,
Freeport, Illinois.

Under the stated circumstances heartiest welcome. Letter follows. Bier."

In bringing about this understanding we believe we have advanced largely the spirit of International good fellowship in which this organization is deeply interested.

Very sincerely yours,
William B. Peck,
Managing-Director,
Inter-State Post-Graduate Assemblies.

AMERICAN BOARD OF OTOLARYNGOLOGY

An examination will be held by the American Board of Otolaryngology in Dallas, Texas, on Monday, April 19, 1926, and in San Francisco, California on Tuesday, April 27, 1926.

Application should be made to the secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

MEDICAL NEWS NOTES

Sheriff Andrew Flesher of Christian county, Illinois, on January 6 served a summons in the $100,000 libel suit filed at Taylorville, Illinois against the American Medical Association by the Hoxide Cancer Institute.

Service was had on Dr. Darwin D. Barr, secretary-treasurer of the Christian County Medical Society, one of the component societies of the American Medical Association. Morris Fischbein of Chicago, editor of the journal of the association, is named in the suit which is based on criticism of the institute as a "fake", published in the January 2 issue.

Late January 6 Taylorville doctors had taken no action except to get in touch with Chicago officials of the association. Injunction suits which it was indicated were in course of preparation had not been filed against them. These suits, Attorney George G. Gillespie of Springfield said, were to be designed to stop certain doctors from attempting to intercept patients from outside Taylorville from coming to the institution.

Mr. Gillespie announced that he had demanded an early trial of the case, out of fairness to his clients, who, he said, had been denied anything resembling a scientific investigation.

"The Hoxide Institute", he said, "is either a fake or a priceless boon to humanity. A trial will tell."

—Burlington Hawkeye.

The report of Edith S. Countryman to the state department of health shows there has been a gradual increase in the number of public health nurses employed in the state.

During the month of October, 1925, 202 public nurses were employed in the state, twenty-nine of which were supported wholly or in part by the Red Cross.

In 1923 there were thirty-seven county nurses, in 1924 there were thirty and in 1925 thirty-two.

The visiting nurses increased from fifty-two in 1923 to fifty-six in 1924 to fifty-seven in 1925.

In 1923 the number of school nurses was seventy-one, in 1924, seventy-two, and in 1925, ninety-one.

Oskaloosa Herald.

A complete check of physicians in the state, show there are 3,058 practicing doctors in Iowa. Dr. Don M. Griswold, health commissioner, reports that Worth county has the fewest, six, while Polk county leads all others with 271 and Woodbury comes next

with 140. A law passed by a recent general assembly requires all physicians to register with the state board of health. This figure indicates that there is about one doctor for each 800 inhabitants.—Audubon Republican.

PERSONAL NOTES

Three physicians were appointed by the board of supervisors, Woodbury county, to treat county patients during the year. Dr. Alvin H. Hendrickson was appointed as county physician in Sioux City at a salary of $1,100 a year. Dr. R. C. Glann was appointed to take care of inmates of the county home and any other county patients in Floyd township. He is to receive $400 a year. Dr. A. J. McLaughlin was appointed to take care of all the county's venereal disease cases, at a salary of $1,200 a year.

January 5 is always a red letter day for the medical profession of this part of the state and is always looked forward to by all the doctors. It is Dr. W. A. Rohlf's birthday anniversary and on that date he holds a clinic that has become a feature that not only gives the doctors an opportunity to get together in a social way, but permits them to brush up in their profession in a way that benefits not only themselves but the entire community in which they live. This year the event proved more of a success than ever. About seventy doctors were present, among them the following specialists: Dr. Jacob Bookbinder, instructor in surgery in a university in Chicago; Drs. Bye, Prentiss, Alcock and Rhoner, of the State University at Iowa City, and Dr. J. F. Auner of Des Moines.

Announcement was made by Dr. William L. Allen of the partnership of Allen & White, physicians with offices in the Central office building, Davenport, that the partnership has been dissolved as of January 15. Dr. Allen has engaged quarters at 406 Kahl building, where he will practice. Dr. Paul White will continue in the quarters in the Central office building as heretofore, and will be associated with Dr. Elmer G. Senty under the name of White & Senty. Dr. Senty has been associated for some time with Drs. Allen and White. Prior to the dissolution of partnership, the two physicians had been associated together for four and one-half years.

Friends here will be pleased at the news that comes from Philadelphia regarding the success of two Cherokee young men who are students in the medical department of Pennsylvania University. Arthur Molyneux and Francis Halford both have been awarded internships in the Queen's Hospital in Honolulu. One will leave for that island city in July and the other in October to remain for one year. —Cherokee Times.

Dr. Bundy Allen, roentgenologist at the Iowa University College of Medicine, has resigned, resignation to take effect February 20. Dr. Allen has accepted a position in a private hospital at Tampa, Florida.

Dr. M. J. Fitzpatrick, city health physician, was elected president of the Mercy Hospital staff at the annual meeting of the organization held at the hospital January 11. Dr. Fitzpatrick takes the place of Dr. C. L. Marston, retiring president.

Dr. W. S. Conkling, who has been confined to his bed and his room for many weeks from a serious illness, is said to be steadily improving and it is hoped that he will soon be able to join his family, with full freedom of the house.

MARRIAGES

Dr. Arthur Smith and Miss Isabelle Amundson, both of Milford, were married January 6, 1926. Dr. Smith is a graduate of the Minnesota University, School of Medicine, and a son of Dr. F. J. Smith, for many years a professor in the Drake University Medical School.

Dr. Dennis H. Kelly of Clinton and Miss Ailen Carney of Grinnell were married at St. Columbanus church at Grinnell, January 4, 1926. Both Dr. and Mrs. Kelly are graduates of Grinnell College. Dr. Kelly graduated from Northwestern University College of Medicine in 1923 with high honors; was an intern, Cook County Hospital and served as a lieutenant in the World War.

OBITUARY

While driving to Des Moines with a patient for the Methodist Hospital at 11 o'clock January 4, Dr. R. F. Eldridge, sixty-eight years old of Dawson, Iowa, suffered injuries from which he died at the King's Daughters Hospital, Perry, Iowa, at 2:30 o'clock. His car skidded on the slushy road and went into a ditch as he drove down a hill near Adel.

Dr. Eldridge had practiced at Dawson for thirty years and practiced at Yale and Perry, Iowa, previous to that time. He was graduated from the University of Iowa College of Medicine in 1881.

Dr. Frederick Ernest Schmidt, fifty-six, life-long resident and veteran physician of this city, died of tuberculosis at his home, 314 West Third street, Muscatine, at 1 o'clock January 7. He had been ill for the past three years.

Dr. Schmidt was born in Muscatine, October 3, 1869, and remained here his entire life. He graduated from the Keokuk Medical College in Keokuk, Iowa, in 1891, and began his practice in Muscatine, which he continued until about three years ago. He married Miss Edith Barnard in Muscatine, June 7, 1899. He was a member of the Muscatine County Medical Society.

He is survived by his wife, one brother, George, and a sister, Mrs. Henry Seefeldt, all of Muscatine; and a sister, Mrs. Henry Fischer of Monmouth, Illinois.

Dr. John Downs of Ft. Madison died at his home January 2, 1926. He was born near Reesville, Ohio, April 15, 1854. Graduated from the high school at Edina, Missouri. He began the study of medicine

under the direction of Dr. Cornelius O'Brien. In the fall of 1876 he entered Rush Medical College and graduated from the College of Physicians and Surgeons, Keokuk, in 1878, and practiced medicine in Edina until 1882, when he moved to Ft. Madison where he practiced until the time of his death.

On October 16, 1883, he married Miss Catherine Schwartz, who died September 25, 1920. For some time before his death, Dr. Downs had been in poor health.

BOOK REVIEWS

A PRACTICE OF GYNECOLOGY

By Henry Jellette, M.D. (Dublin University), F.R.C.P.I., Consulting Obstetrician to the Department of Public Health of New Zealand; Consulting Gynecologist, Rotunda Hospital, Dublin, Etc., Etc.; Fifth Edition, with 417 Illustrations, Many in Colors and 15 Colored Plates. Lea & Febiger, Philadelphia, 1925. Price, $8.50.

This excellent work of 744 pages, by a leading gynecologist of Great Britain, published by the well known firm of Lea & Febiger Company of Philadelphia, presents to the American reader a most admirable, practical and scientific work on gynecology. In this, the fifth edition, the most recent advances in gynecology have been presented and evaluated. The illustrations are real works of art and will compare favorably with the best we have seen. One thing in particular attracts our attention, the logical manner of arrangement and the clear expression which is so characteristic of British writers.

The questions of the endocrine therapy, which are so much in the minds of the modern gynecologists, are considered in relation to the several subjects to which they seem to belong. We have read this book with much satisfaction and can speak of it in the highest terms without a detailed review.

LISTER AND THE LIGATURE

A Landmark in the History of Modern Surgery Compiled by the Research Readers of the Scientific Department of Johnson & Johnson. Ninety-four Pages. Illustrated.

The research workers state that having lived through the years covering the re-introduction and re-birth of surgical ligatures and sutures, they have put together the story of the re-introduction and re-birth of this important surgical material.

The first part of the book covers briefly the period before Lister, the time of Lister, and after Lister, leading up to the main portion of the book which contains extracts from the writings of Sir Joseph Lister relating to the ligature. The book contains in full the story of Lister's connection with the ligature taken from the publications in which his writings appear. In addition there is given a complete bibliography of Joseph Baron Lister collected from the journals in which the articles appeared. In the extracts from Lister's writings are reproduced a number of drawings made by Lister himself. The illustrations also cover a portrait of Lister, a picture of Lister's famous spray apparatus, a bas relief of Lister in the Policlinico Umberto I, Rome, Lister's Medallion in Westminister Abbey.

THE ROCKEFELLER FOUNDATION

A Review for 1924. By George E. Vincent, President of the Foundation.

During the year 1924, the International Health Board, the China Medical, the Division of Medical Education, and the Division of Studies of the Rockefeller Foundation, underwrote to the amount of $350,000, a plan for publishing an international abstract journal of the biologic sciences. In relation to the activities of the Foundation, the review presents an interesting account of the accomplishments of the Foundation in many parts of the world, on advancing the cause of medical sciences.

A MANUAL OF GYNECOLOGY

By John C. Hirst, M.D., Associate in Obstetrics; University of Pennsylvania; Second Edition, Revised; 12 Mo. of 508 Pages with 195 Illustrations. W. B. Saunders Company, 1925, $3.50 Net.

The merit of this book lies in the fact that it presents the subject of gynecology very much as the author has presented it in his twenty years of successful service as a professor in the University of Pennsylvania, to his classes. Very little space is given to the discussion of unsettled problems but direct attention is given to the practical side of the subject of the management and treatment of the diseases of women. The operative features are made incidental to the general treatment and not the primary object of gynecologic practice. It is the kind of a manual that should be in the hands of the general practitioner who must of necessity deal with gynecologic cases in his everyday practice.

ABT'S PEDIATRICS

By 150 Specialists. Edited by Isaac A. Abt, M.D., Professor of Diseases of Children, Northwestern University Medical School, Chicago. Set Complete in Eight Octavo Volumes Totaling 8000 Pages with 1500 Illustrations and Separate Index Volume Free. W. B. Saunders Company, 1925. Price, Cloth, $10 Per Volume. Sold by Subscription.

Volume seven of 879 pages and 70 illustrations, is devoted to diseases of the nervous system.

The first chapter of this volume is devoted to the Physiology of the Nervous System of Early Life, by Percy G. Stiles, Ph.D., Harvard University. Following the introductory chapter on Physiology there are fifteen contributions, beginning with the brain

and following in logical order. The different diseases and the surgical aspect of brain diseases are considered by men prominent in disease of the brain and nervous system. The difficulties encountered in the diagnosis of diseases of children are no less in diseases of the nervous system, than in diseases of the other organs and systems and much study and observation are necessary to arrive at a helpful diagnosis. The responsibility of the doctor who treats diseases of children is great, for upon a proper conception of the nature of the disease—especially of the nervous system—and its management, may influence the future of a life just fairly beginning. This volume surely is entitled to a careful study.

MEDICAL CLINICS OF NORTH AMERICA

Vol. viii; Number 6; Octavo of 278 Pages and 47 Illustrations and Complete Index to Volume 6. Price Per Clinic Year, Paper $12, Cloth $16. W. B. Saunders Company, 1925.

This, a Boston Number, is a very attractive volume both in appearance and contents.

It is our custom to present a few clinics as an index of the quality of the entire number. The contents of this number is of such high character that it is difficult to select any particular clinic. The first numbers are Heart Clinics. Dr. John Lovett Morse presents some observations on Congenital Heart Disease and Dr. Edwin A. Locke on Spontaneous Rupture of the Heart. These contributions are of especial interest as the titles indicate. Of associated importance, although somewhat remote are two clinics, one by Dr. William H. Robey, under the title: The Differentiation Between Gall-Bladder Disease and Coronary Sclerosis in the Middle-Aged and Cases of Coronary Occlusion with Recovery, by Dr. Samuel A. Levin. We may mention in this connection a clinic of Drs. Howard B. Sprague and Paul D. White on Heart Block During Auricular Paroxysmal Tachycardia (Clinical Observations on Three Cases). Of particular interest is a contribution by Drs. Elliott P. Joslin, Howard F. Root and Priscilla White on Diabetic Coma and Its Treatment.

PREVENTIVE MEDICINE

By Mark F. Boyd, M.D , C.P.H., Member of Regular Field Staff, International Health Board of Rockefeller Foundation; Formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Second Edition, Revised; Octavo Volume of 429 Pages with 135 Illustrations. W. B. Saunders Company, 1925. Cloth $4 Net.

This important book will be of especial interest to those engaged in Preventive Medicine and in particular to those engaged in Public Health Service. Attractive chapters are presented on Water Purification and on Milk Production as measures of health control. An important section is devoted to Occupational Diseases and Hazards of Occupation.

The Hygiene of Infants and Childhood receive a fair amount of attention. It is one of the attractive books to be read not only by physicians practicing among the people, and authorized health officers, but by all classes of people interested in their surroundings and in the production and preparation of their food.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Third Series; Volume xlvi; 1924. Printed for the College.

Very few books come to us which give more real pleasure than the Annual Volume of these Transactions. There is much of a personal nature of men whom we delight to know and to honor, and there are many carefully thought out papers and discussions which we may read with great profit in the several departments of medicine. The 892 pages of this volume are filled with valuable information, touching many things gathered by this body of distinguished medical practitioners and scientists.

REPORT OF THE BOARD OF CONTROL OF STATE INSTITUTIONS

Fourteenth Biennial Report of the Board of Control of State Institutions for the Period Ending June 30, 1924. Published by the State of Iowa, Des Moines.

It is really worth while for those interested—and everyone should be interested—to look over at least once a year what the Board of Control is doing and saying about institutions which the taxpayer is contributing large sums of money to maintain. This information can easily be obtained by reading these reports.

SOME TOOL SUBJECTS FOR SURFACE REPAIR

Dr. V. P. Blair, St. Louis, Missouri. From the Department of Surgery, Washington University Medical School, St. Louis, Missouri.

This is a small volume of reprints showing the results of operations for surface repair. Dr. Blair has developed a remarkable skill in this class of work and it gives us great pleasure to call attention to his skill in restoring unsightly surface deformities.

PUBLIC HEALTH BULLETIN

No. 141; "Studies Upon Leprosy". Government Printing Office, Washington, D. C.

In this report may be found the latest information concerning leprosy. We have enough of this disease in sections in which we have a degree of responsibility to give us an interest.

Dear Doctor Throckmorton:

You are probably aware of the fact that Bernarr Macfadden is sending "lecturers" and exhibitors over the country giving a series of lectures on physical culture before local civic clubs. In some cases they have even persuaded the school authorities to permit the use of the public schools for this purpose.

When they attempted to do this in Richmond, Virginia, the state health commissioner, Dr. Ennion G. Williams, immediately got in touch with the American Medical Association and asked for such material as we had published on Macfadden so that he might put it in the hands of the officers of the civic organizations who had been approached by the Macfadden advance agents. He was sent pages from those issues of "Hygeia" that carried articles on this subject and was able with these to head off the Macfadden scheme as the Rotary, Kiwanis, Lions and other civic clubs cancelled the "lectures".

We now have the Macfadden material in reprint form, and we are enclosing one of the reprints. May we suggest that when the "Physical Culture" concern attempts to impose upon people of your state in this way that the local health officer be urged to get our reprints to put in the hands of the officials of the various clubs and other organizations through which Macfadden tries to work.

The Journal A. M. A.,
Arthur J. Cramp,
Bureau of Investigation.

RESEARCH RESULTS

Recent research in the field of medicinal chemistry, coupled with scientific physiological and clinical investigation is effecting profound changes in the practice of medicine.

Discoveries have already been announced which are changing the methods of treating diabetes, high blood-pressure, and syphilis. So promising is the research work now being carried on in universities, and by large pharmaceutical manufacturers, that further important discoveries may soon be expected. It is not too much to hope that definite discoveries may even be made in the field of cancer and tuberculosis.

During the past year, announcement of the discovery of several new and important medicinal chemicals has been made by the Research Department of the Abbott Laboratories, North Chicago, Illinois. Among these discoveries are Butesin Picrate, a new chemical body, combining both anesthetic and antiseptic properties.

Other important research results from the Abbott Laboratories are Butyn and Benzyl Fumarate, both of which are fully described in "New and Non-Official Remedies".

During the past ten years the following important Council-Passed medicinal chemicals have been manufactured by, and added to the list of the Abbott Laboratories: Anesthesin, Acriflavine, Barbital, Chlorazene, Dichloramine-T, Cinchophen, Neocinchophen, Neutral Acriflavine, and Procaine.

These notable additions to the list of American-made, medicinal chemicals promise much for the future cordial relations between scientific, manufacturing chemistry and progressive medical practice.

NEW SILVER COMPOUNDS

The silver salts have lost none of their prestige, notwithstanding the flood of topical antiseptics and germicides which is overflowing the market. On the other hand, certain improvements are being made, with the object of avoiding the irritating or staining features of the older silver compounds.

By an ingenious combination of silver iodide with a gelatinous protein, this salt has been made impervious to the action of sunlight, so that its solutions (or suspensions) do not turn dark on exposure. Thus the staining effect of the silver is avoided. And it would appear from bacteriologic tests made by the manufacturers (tests which, of course, any bacteriologist can repeat) that the germical activity of the new silver preparation is at least equal to that of pure carbolic acid; moreover, that, whatever the concentration of the solution, inflamed tissues are not irritated by its application.

The name of the product referred to is Neo-Silvol, and the manufacturers are Parke, Davis & Co. Some of the applications of Neo-Silvol are mentioned in an advertisement which appears in this issue.

NEW AND NON-OFFICIAL REMEDIES

In addition to the articles enumerated in our letter of October 30th, the following have been accepted:

Abbott Laboratories:
- Arsphenamine—D. R. L., 0.3 Gm. Ampules.
- Arsphenamine—D. R. L., 0.5 Gm. Ampules.
- Neoarsphenamine—D. R. L., 0.15 Gm. Ampules.
- Neutral Acriflavine Jelly 1:1000—Abbott.

Eli Lilly & Company:
- Para-Thor-Mone-Lilly.
  - Para-Thor-Mone-Lilly P-20, 5 C.c.

Merrell-Soule Company:
- Powdered Whole Lactic Acid Milk—Merrell-Soule.

Parke, Davis & Company:
- Boro—Chloretone.
- Ovarian Residue Desiccated—P. D. & Co.:
  - Capsules Ovarian Residue Desiccated—P. D. & Co. 5 grains.
  - Tablets Ovarian Residue Resiccated—P. D. & Co. 5 grains.
- Ovarian Substance Desiccated—P. D. & Co.
  - Tablets Ovarian Residue Desiccated—P. D. & Co. 5 grains.

Swan-Myers Company:
- Ampoules Dextrose 50 Per Cent., 20 Cc.—Swan-Myers.

(Continued on advertising page xxx)

INTERNAL MEDICINE

DR. D. S. FAIRCHILD
Practice Limited to
CONSULTATIONS
Wilson Building
Clinton, - - - - - - - - - - Iowa

DR. WM. H. RENDLEMAN
DR. JOHN I. MARKER
DIAGNOSIS AND INTERNAL MEDICINE
401 Lane Building
Davenport, - - - - - - - - - - Iowa

DR. JOHN H. PECK
Practice Limited to
DISEASES OF THE CHEST
1222 Bankers Trust Bldg.
Des Moines, - - - - - - - - - Iowa

DR. A. C. HUTCHINS
Practice Limited to
THE TREATMENT OF GOITER
323 Flynn Building
Des Moines, - - - - - Iowa

MERRILL M. MYERS, M.D.
DISEASES OF THE HEART
819 Equitable Building
Des Moines, - - - - - - - - - Iowa

DR. AARON C. CONAWAY
Practice Limited to
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Attending Physician to St. Bernard's Hospital
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Council Bluffs Clinic
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OBSTETRICIAN
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Telephone Drake 352—Louise Price, R.N., Registrar

NEW AND NON-OFFICIAL REMEDIES

(Continued from page 152)

In addition to the articles enumerated in our letter of November 27, the following have been accepted:

Eli Lilly & Co.:
Coco—Quinine.

Mallinckrodt Chemical Works:
Sulpharsphenamine—Mallinckrodt 0.1 Gm. Ampules.
Sulpharsphenamine—Mallinckrodt 0.2 Gm. Ampules.
Sulpharsphenamine—Mallinckrodt 0.3 Gm. Ampules.
Sulpharsphenamine—Mallinckrodt 0.4 Gm. Ampules.
Sulpharsphenamine—Mallinckrodt 0.5 Gm. Ampules.
Sulpharsphenamine—Mallinckrodt 0.6 Gm. Ampules.

H. K. Mulford Co.:
Insulin—Mulford 10 Units 10 c.c.
Insulin—Mulford 20 Units 10 c.c.
Insulin—Mulford 40 Units 10 c.c.
Insulin—Mulford 80 Units 10 c.c.

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W. J. Murray, Vice-President Des Moines National Bank, Des Moines
Howard T. Fuller, Vice-President Iowa Loan & Trust Co., Des Moines
J. H. Allen, President Hawkeye Life Insurance Co., Des Moines
H. W. Beyers, former Attorney General of Iowa, Clark and Beyers, Des Moines

SOME OF MY SATISFIED DES MOINES CLIENTS
PHYSICIANS
C. N. O. Leir, M.D., 302 Equitable Bldg.
F. W. Rice, M.D., 1118 Equitable Bldg.
C. C. Shope, M.D., 20 Shope Bldg.
DENTISTS
Emery O. West, D.D.S., 608 Equitable Bldg.
C. R. Abbott, D.D.S., 515 Hippee Bldg.

The Journal of the Iowa State Medical Society

Vol. XVI — Des Moines, Iowa, April, 1926 — No. 4

IOWA STATE MEDICAL SOCIETY

SEVENTY-FIFTH ANNUAL SESSION

DES MOINES
MAY 12, 13, 14. 1926

Program

OPENING EXERCISES

Wednesday, May 12
8:30 a. m.

Call to Order by the President—
Smith A. Spilman, M.D., Ottumwa

Invocation— Rev. Herbert Scott, D.D., Des Moines
Pastor, First Methodist Episcopal Church

Address of Welcome for the City—
Harvey Ingham, Des Moines
Editor, The Des Moines Register

Address of Welcome for the Profession—
Thomas A. Burcham, M.D., Des Moines
President Polk County Medical Society

Response— Chas. Henry Magee, M.D., Burlington

Gavel Presentation— Lewis Schooler, M.D., Des Moines

SECTION CHAIRMEN AND REPORTERS

Section on Medicine—
Chairman, Edward T. Edgerly, M.D., Ottumwa

Section on Surgery—
Chairman, Prince E. Sawyer, M.D., Sioux City

Section on Ophthalmology, Otology and Rhinolaryngology—
Chairman, Elmer P. Weih, M.D., Clinton

Official Reporter, General Session—
Miss Adelaide Folsom, Ripon, Wisconsin

Reporter, House of Delegates—
Miss Marie Crank, Des Moines

Wednesday, May 12
9:00 a. m.

CLINIC DEMONSTRATION

9:00–9:55. Surgery of the Hand—
Allen Buchner Kanavel, M.D., Chicago
John W. Martin, M.D., Des Moines, Chairman of Clinic

10:00–10:55. Otolaryngology—
Max Aaron Goldstein, M.D., St. Louis
William W. Pearson, M.D., Des Moines, Chairman of Clinic

11:00–11:55. Surgery—Portal and Biliary Cirrhosis—
William James Mayo, M.D., Rochester
Oliver J. Fay, M.D., Des Moines, Chairman of Clinic

Wednesday, May 12
1:30 p. m.

Address—Experiences in Neurologic Surgery—
Allen Buchner Kanavel, M.D., Professor of Surgery, Northwestern University Medical School, Chicago

Address—The American Medical Association and Its Work—
Olin West, M.D., Secretary and General Manager, American Medical Association, Chicago

Address—Problems of the Deaf—
Max Aaron Goldstein, M.D., Saint Louis

Address—Tomorrow Is Also a Day—
Albert R. Mitchell, M.D., Trustee of the American Medical Association, Lincoln

Address—The Twilight Zone of Medicine—
William James Mayo, M.D., Past President, American Medical Association, Surgeon and Chief of Staff to Mayo Clinic, Rochester

Wednesday Evening, May 12

SOCIAL ENTERTAINMENT

Banquet—Hotel Fort Des Moines
Six-thirty o'clock
Photo by Townsend Studio

Thursday, May 13
9:00 a. m.

CLINIC DEMONSTRATION

9:00–9:55. Diseases of the Thyroid Gland—
Charles Addison Elliott, M.D., Chicago
Addison C. Page, M.D., Des Moines, Chairman of Clinic

10:00–10:55. Dermatology—
William Allen Pusey, M.D., Chicago
Harry C. Willett, M.D., Des Moines, Chairman of Clinic

11:00–11:55. Surgery—Pelvic and Abdominal—
John Blair Deaver, M.D., Philadelphia
John C. Rockafellow, M.D., Des Moines, Chairman of Clinic

Thursday, May 13
1:30 p. m.

Periodic Health Examination—A Clinical Demonstration—
CHARLES ADDISON ELLIOTT, M.D., Professor of Internal Medicine, Northwestern University Medical School, Chicago

Address—Helping the Future Citizen—
FRANKLIN PAUL GENGENBACH, M.D., Associate Professor of Pediatrics, University of Colorado School of Medicine, Denver

Address—Our Changing Conceptions of Eczema—
WILLIAM ALLEN PUSEY, M.D., Past President, American Medical Association, Emeritus Professor of Dermatology, University of Illinois College of Medicine, Chicago

Address—Epidemic Encephalitis—
GEORGE ELMER PRICE, M.D., Former Associate Professor of Nervous and Mental Diseases in the Jefferson Medical College, Spokane

Address—The Correlation of Clinical and Pathological Findings in Cardiovascular Disease—
PAUL DUDLEY WHITE, M.D., Cardiologist, Massachusetts General Hospital, Boston

Address—The Romance of Surgery—
JOHN BLAIR DEAVER, M.D., Emeritus Professor of Surgery, University of Pennsylvania School of Medicine, Philadelphia

Thursday, May 13
7:30 p. m.

GUESTS' AND PAST PRESIDENTS' EVENING

Call to Order by the First Vice-President—
FRANK C. MEHLER, M.D., New London

President's Address—
SMITH A. SPILMAN, M.D., Ottumwa

A Diamond Jubilee—
WALTER L. BIERRING, M.D., Des Moines

Presentation of Guests and Past Presidents—
TOM B. THROCKMORTON, M.D., Des Moines

Reminiscences—
CHARLES RYAN, M.D., Des Moines, Chairman

Award of Prizes—
For the Best Story pertaining to Medical Experiences
For the Oldest Member Present
For the Best Antique Medical and Surgical Exhibit

Friday, May 14
9:00 a. m.

CLINIC DEMONSTRATION

9:00– 9:55. Pediatrics—Faulty Posture and Malnutrition—
FRANKLIN PAUL GENGENBACH, M.D., Denver
FRED MOORE, M.D., Des Moines, Chairman of Clinic

10:00–10:55. Neurology—
GEORGE ELMER PRICE, M.D., Spokane
TOM B. THROCKMORTON, M.D., Des Moines, Chairman of Clinic

11:00–11:55. Cardiology—
PAUL DUDLEY WHITE, M.D., Boston
MERRILL M. MYERS, M.D., Des Moines, Chairman of Clinic

ENTERTAINMENT

Wednesday, May 12

Luncheon for Visiting Ladies at Wakonda Club. One O'clock. Ladies Meet at the Hotel Fort Des Moines for Transportation

Banquet, Hotel Fort Des Moines, physicians, their wives and guests, Six-thirty O'clock

Thursday, May 13

Matinee for Visiting Ladies, Two O'clock

Bridge Party, Visiting Ladies, Oak Room, Hotel Fort Des Moines, Eight O'clock

Guests and Past Presidents Evening, Hotel Fort Des Moines, Seven-thirty O'clock

MEETING PLACES

Headquarters—Hotel Fort Des Moines, Tenth and Walnut Streets

General Meetings—Hotel Fort Des Moines, Ball Room

House of Delegates—Hotel Fort Des Moines, Oak Room

Registration and Exhibits—Hotel Fort Des Moines, Mezzanine Floor

Headquarters for Ladies—Hotel Fort Des Moines

HOUSE OF DELEGATES

Hotel Fort Des Moines—Oak Room

Tuesday, May 11
1:30 p. m.

Roll Call
Report of Secretary
Report of Treasurer
Report of Council
Report of Trustees
Report of Delegates to A. M. A.
Report of Standing Committees
Medico-Legal—
DAVID S. FAIRCHILD, SR., Clinton, Chairman
Scientific Work—
SMITH A. SPILMAN, Ottumwa, Chairman
Public Policy and Legislation—
WILLIAM W. PEARSON, Des Moines, Chairman
Constitution and By-Laws—
VERNON L. TREYNOR, Council Bluffs, Chairman
Publication—
DAVID S. FAIRCHILD, SR., Clinton, Chairman
Finance—
ERNEST C. MCCLURE, Bussey, Chairman
Arrangements—
SMITH A. SPILMAN, Ottumwa, Chairman
Field Activities Committee—
WALTER L. BIERRING, Des Moines, Chairman
Report of Special Committees
Medical Library—
DAVID S. FAIRCHILD, SR., Clinton, Chairman
Military Affairs—
DONALD MACRAE, JR., Council Bluffs, Chairman

Memorials and Communications
New Business
Election of Committee on Nominations

Friday, May 14
1:30 p. m.

Roll Call
Reading of Minutes
Report of Committee on Nominations
Election of Officers
Report of Committees
Unfinished Business
New Business

IOWA STATE MEDICAL SOCIETY OFFICERS AND COMMITTEES 1925-1926

President.....Smith A. Spilman, Ottumwa
President-Elect.....Thomas E. Powers, Clarinda
First Vice-President.....Frank C. Mehler, New London
Second Vice-President.....Frederick G. Murray, Cedar Rapids
Secretary.....Tom B. Throckmorton, Des Moines
Treasurer.....Addison C. Page, Des Moines

COUNCILORS

	Term Expires
First District—George B. Crow, Burlington	1930
Second District—David N. Loose, Maquoketa	1927
Third District—Amos G. Shellito, Independence	1926
Fourth District—Paul E. Gardner, New Hampton, Chrm.	1929
Fifth District—George E. Crawford, Cedar Rapids	1928
Sixth District—Samuel T. Gray, Albia	1928
Seventh District—Channing G. Smith, Granger, Secretary	1929
Eighth District—Fred A. Bowman, Leon	1929
Ninth District—Harry B. Jennings, Council Bluffs	1927
Tenth District—Watson W. Beam, Rolfe	1926
Eleventh District—Giles C. Moorhead, Ida Grove	1930

TRUSTEES

Oliver J. Fay, Des Moines.....1928
William B. Small, Waterloo.....1927
Michael J. Kenefick, Algona.....1926

DELEGATES TO A. M. A

Donald Macrae, Jr., Council Bluffs.....1926
Bert L. Eiker, Leon.....1926
Mathew N. Voldeng, Woodward.....1927
William Jepson, Sioux City.....1926

ALTERNATE DELEGATES

David N. Loose, Maquoketa.....1926
John F. Herrick, Ottumwa.....1926
Joseph W. Harrison, Guthrie Center.....1927
Nicholas Schilling, New Hampton.....1926

STANDING COMMITTEES

Medico-Legal

David S. Fairchild, Sr., Clinton.....1927
Harry B. Jennings, Council Bluffs.....1928
William B. Small, Waterloo.....1926

Scientific Work

Smith A. Spilman.....Ottumwa
Tom B. Throckmorton.....Des Moines
Addison C. Page.....Des Moines

Public Policy and Legislation

William W. Pearson.....Des Moines
James F. Edwards.....Ames
Thomas A. Burcham.....Des Moines
Smith A. Spilman.....Ottumwa
Tom B. Throckmorton.....Des Moines

Constitution and By-Laws

Vernon L. Treynor.....Council Bluffs
Chas. B. Taylor.....Ottumwa
Tom B. Throckmorton.....Des Moines

Publication

David S. Fairchild, Sr.....Clinton
Walter L. Bierring.....Des Moines
Fred M. Smith.....Iowa City

Finance

Ernest C. McClure.....Bussey
Daniel F. Houston.....Burlington
Chas. Ellyson.....Waterloo

Arrangements

Smith A. Spilman.....Ottumwa
Tom B. Throckmorton.....Des Moines
Addison C. Page.....Des Moines
Loren K. Meredith.....Des Moines
William J. Fenton.....Des Moines

Field Activities Committee

Iowa State Medical Society,
Walter L. Bierring, Chairman.....Des Moines
President-Elect Thomas E. Powers.....Clarinda
Bert L. Eiker.....Leon
Iowa State Board of Health.....Don M. Griswold, Des Moines
Faculty, State University College of Medicine
Nathaniel G. Alcock, Iowa City
State Conference of Social Work.....Frank E. Sampson, Creston
Iowa Tuberculosis Association,
Mr. Thomas J. Edmonds, Secretary, Des Moines
Advisory Secretary.....Tom B. Throckmorton, Des Moines

SPECIAL COMMITTEES

Medical Library

David S. Fairchild, Sr.....Clinton
Walter L. Bierring.....Des Moines
Oliver J. Fay.....Des Moines
*Gershom H. Hill.....Des Moines
Conrad R. Harken.....Osceola

Military Affairs

Donald Macrae, Jr.....Council Bluffs
Harold A. Spilman.....Ottumwa
Wilbur S. Conkling.....Des Moines

*Deceased

PAST PRESIDENTS

*Enos Lowe, Burlington.....1851
*D. L. McGugin, Keokuk.....1852
*J. D. Elbert, Keosauqua.....1853
*J. M. Witherwax, Davenport.....1854
*George Reeder, Muscatine.....1855
*Thomas Siveter, Salem.....1856
*J. C. Hughes, Keokuk.....1857
*Thomas Siveter, Salem.....1858
*J. H. Rauch, Burlington.....1859
*E. S. Barrows, Davenport.....1860
*R. S. Lewis, Dubuque.....1861
*J. F. Henry, Burlington.....1862
No meeting of the Society.....1862
No meeting of the Society.....1863
*H. T. Cleaver, Keokuk.....1864
*M. B. Cochran, Davenport.....1865
*J. C. Hughes, Keokuk.....1866
*J. W. H. Baker, Davenport.....1867
*William Watson, Dubuque.....1868
*Philip Harvey, Burlington.....1869
*S. B. Thrall, Ottumwa.....1870
*James Gamble, LeClaire.....1871
*A. G. Field, Des Moines.....1872
*J. Williamson, Ottumwa.....1873
*W. S. Robertson, Muscatine.....1874
*H. T. Cleaver, Keokuk.....1875
*W. F. Peck, Davenport.....1876
*H. C. Bulis, Decorah.....1877
*H. Ristine, Cedar Rapids.....1878
*A. M. Carpenter, Keokuk.....1879

*G. P. Hanawalt, Des Moines 1880
*S. B. Chase, Osage 1881
*T. J. Caldwell, Adel 1882
*D. Scofield, Washington 1883
*S. E. Robinson, West Union 1884
*H. C. Huntsman, Oskaloosa 1885
*D. W. Crouse, Waterloo 1886
*A. W. McClure, Mount Pleasant 1887
*J. C. Hinsey, Ottumwa 1888
*Donald Macrae, Council Bluffs 1889
*J. M. Emmert, Atlantic 1890
*Wm. D. Middleton, Davenport 1891
*George F. Jenkins, Keokuk 1892
*C. M. Hobby, Iowa City 1893
Lewis Schooler, Des Moines 1894
*A. L. Wright, Carroll 1895
David S. Fairchild, Clinton 1896
*J. C. Shrader, Iowa City 1897
*Edward Hornibrook, Cherokee 1898
Henry B. Young, Burlington 1899
*Thos. J. Maxwell, Keokuk 1900
*R. E. Conniff, Sioux City 1901
James R. Guthrie, Dubuque 1902
*James T. Priestley, Des Moines 1903
*James A. Scroggs, Keokuk 1904
*D. C. Brockman, Ottumwa 1905
William P. Jepson, Sioux City 1906
*E. W. Clarke, Grinnell 1907
Walter L. Bierring, Iowa City 1908
*Charles F. Wahrer, Fort Madison 1909
George E. Crawford, Cedar Rapids 1910
M. Nelson Voldeng, Cherokee 1911
*L. W. Littig, Davenport 1912
Vernon L. Treynor, Council Bluffs 1913
Lee Wallace Dean, Iowa City 1914
Henry C. Eschbach, Albia 1915
William B. Small, Waterloo 1916
John F. Herrick, Ottumwa 1917
John N. Warren, Sioux City 1918
Max E. Witte, Clarinda 1919
William L. Allen, Davenport 1920
Donald Macrae, Jr., Council Bluffs 1921
Alanson M. Pond, Dubuque 1922
Charles J. Saunders, Fort Dodge 1923
Oliver J. Fay, Des Moines 1924
Frank M. Fuller, Keokuk 1925

*Deceased

SCIENTIFIC EXHIBIT

Standard Chemical Company, Des Moines.
Standard Oil Company, New York.
Magnuson X-Ray Company, Omaha, Nebraska
H. A. Metz Company, New York.
Standard X-Ray Company, Des Moines.
Denny Brann, Des Moines.
Victor X-Ray Company, Des Moines.
Geneva Optical Company, Des Moines.
Western X-Ray Company, Des Moines.
V. Mueller & Co., Chicago.
Paul E. Johnson, Chicago.
Physicians Supply Company, Minneapolis.
Chas. H. Phillips, New York.
Horlick's Malted Milk Company, Racine, Wisconsin.
Engeln Electric Company, Des Moines.
Lederle Antitoxin Laboratories, Kansas City, Missouri.
Huston Bros., Chicago.
Burroughs-Wellcome & Co., New York.
E. R. Squibb & Sons, New York.
Medical Protective Company, Ft. Wayne, Indiana.
The Maltbie Chemical Co., Newark, New Jersey.
Merrell-Soule Co., New York.
Denver Chemical Mfg. Co., Syracuse, New York.
Iowa Tuberculosis Association.
Iowa Heart Association.

STATE SOCIETY IOWA MEDICAL WOMEN

TWENTY-NINTH ANNUAL MEETING DES MOINES

Tuesday, May 11, 1926

Headquarters—Chamberlain Hotel
Rose Room

PROGRAM

Morning Session
9:00 a. m.

Called to Order by President—
PAULINE M. LEADER, M.D., Clarinda

Greeting—
NELLE S. NOBLE, M.D., Des Moines Women's Medical Society

Appointment of Committees—

Pediatric Clinic— HELEN JOHNSTON, M.D., Des Moines

President's Address—The Bent and Trend of Psychiatry of Today

Annual Business Meeting
11:00 a. m.

Luncheon, Harris-Emery Tea Room, 12:30 p. m.
(Guests of the Des Moines Chamber of Commerce)

Afternoon Session
2:00 p. m.

Recent Developments in Preventive Medicine—
EPPIE S. MCCREA, M. D., Eddyville
Discussion led by SOPHIE HINZE SCOTT, M.D.

Address—Cervix Uteri, Offender—
ELVENOR ERNEST, M.D., Topeka, Kansas

The Sheppard-Towner Clinics in Iowa—
JOSEPHINE WETMORE RUST, M.D., Fort Dodge

Hydrotherapy in the Treatment of Mental Diseases—
ROLLETTA O. JOLLY, M.D., *(by invitation)*, Iowa City
Discussion led by JULIA F. HILL, M.D., Des Moines

Internal Secretions and Metabolism—
ROSE BUTTERFIELD, M.D., Indianola
Discussion led by GRACE SAWYER, M.D.

Completion of Unfinished Business

Dinner, Younker's Tea Room, 6:30 p. m.

Theatre Party

OFFICERS

President ..... PAULINE M. LEADER, M.D., Clarinda
Vice-President ..... EMMA ACKERMAN, M.D., Sioux City
Secretary ..... GRACE DOANE, M.D., Des Moines
Treasurer ..... MARY TINLEY, M.D., Council Bluffs

COMMITTEES

Credentials

NELLE S. NOBLE, M.D. JANE WRIGHT, M.D.
JESSIE HUDSON, M.D.

Ethics

EDNA SEXSMITH, M.D. ELEANOR HUTCHINSON, M.D.
ALICE HATCH, M.D.

Publication

Margaret Nelson, M.D. Grace Sawyer, M.D.
Margaret Mills, M.D.

Federation

Sophie Hinze Scott, M.D. Mary Tinley, M.D.
Rose Butterfield, M.D.

Constitution and By-Laws

Jeannette Throckmorton, M.D. Fay Heflin, M.D.
Alice Hatch, M.D.

Arrangements

Julia F. Hill, M.D. Mae Habenicht, M.D.
Jennie Coleman, M.D.

Districts

Emma M. Ackerman, M.D. Mary Ross, M.D.
Nelle S. Noble, M.D. Emma Jewel Neal, M.D.

THE DIAMOND JUBILEE ANNIVERSARY

Back in 1850, while the state was still in swaddling clothes, a group of earnest medical men, having the best interests of their profession at heart, met in harmony and organized the society which has since been passed down as a heritage to the present members of the Iowa State Medical Society. The first meeting was held in 1851 under the leadership of Doctor Enos Lowe, of Burlington, the first President. Since that year the Society has met annually, with the exception of the years 1862 and 1863, when all Society activity was replaced by the more trying duties attendant upon the Civil War.

Next May the Iowa State Medical Society will celebrate its seventy-fifth birthday. In recognition of this the Scientific Committee, with the help of the Section Chairmen, decided to commemorate this significant event by formulating a program in keeping with such an occasion. A radical departure from the usual type of program having been decided upon, and the die so cast, physicians and surgeons of national and international reputation were sought to fill the places, both as clinicians and teachers. The task was not an easy one. No sister state society had blazed out a similar trail, no precedent or similar example had been established. The program, in its embryonic state, seemed a long way from fruition. Recognizing the fact that of more recent time the tendency of medical men was toward clinical demonstrations, the Committee accordingly adopted the plan of having clinics held during the morning hours, with talks or addresses by guests during the afternoons. With these fundamental principles decided upon, the problem of securing physicians and surgeons as guests of the society next presented itself for solution. To the apparent surprise of all, the task was not a difficult one. The response to the invitations was cordial and hearty. As a result, the Committee takes pleasure and pride in pointing to its achievement and in calling the profession's attention to the names of the guests who have so kindly and courteously consented to come to Iowa and to take an active part in the program. The names of most of these distinguished gentlemen are common knowledge in the households of most physicians. There may be some whose names are strange, but it is only fair to state, in the words of the astronomer, that "each is a scintillating star of the first magnitude in his own firmament". There never has been in the history of Iowa medicine—since its organization in 1850—the promise of such a gathering of scientific medical men as guests of the institution. This fact alone is significant and to these guests we look forward with pleasure in meeting them, and in anticipation of the scientific medical and surgical pabulum which they will have for their audiences. As near as possible all branches of medicine and surgery were covered, exceptions being in some specialties not well adapted for clinical presentation. That the nature of some specialties are such as to limit or exclude them from ready clinical demonstration is well known and needs no further comment.

The program as thus far outlined will be entirely in the hands of our out-of-state medical friends, with the exception of the Presidential Address, and an historical review of Iowa medicine covering the span of years which has elapsed since the organization of the Society. These addresses will be given by Doctor Smith A. Spilman, and Doctor Walter L. Bierring. Acceptances have been received from the following guests:

Dr. Olin West, Secretary, Chicago, and Dr. Albert R. Mitchell, Trustee, Lincoln, as representatives of the American Medical Association.

Dr. Paul D. White, Boston, well known cardiologist and head of the department in the Massachusetts General Hospital.

Dr. John B. Deaver, Philadelphia, Emeritus Professor of Surgery in the Medical School of the University of Pennsylvania.

Dr. Max A. Goldstein, St. Louis, whose work on the re-education of the deaf has attracted wide and favorable comment.

Dr. Allen B. Kanavel, Dr. Charles A. Elliott, and Dr. William A. Pusey, of Chicago, will represent the "Windy City" as its clinic triumvirate. Each in his own field of endeavor as surgeon, internist, dermatologist, has made a name for himself and for American medicine.

Dr. William J. Mayo, Rochester, needs no introduction to an Iowa medical audience.

Dr. Franklin P. Gengenbach, Denver, is one of the West's noted pediatricians.

Dr. George E. Price, Spokane, has made an enviable reputation for himself as a neurologist in the great northwest.

With such a group of distinguished scientific men coming to Des Moines, the success of the Diamond Jubilee Anniversary is already assured. Nothing but some unavoidable happening will keep these men from fulfilling their part, and I bespeak for them—in the name of the Iowa State Medical Society—one of the best attended, most-talked-of sessions, ever known in the history of Iowa medicine. To make this certain, some pre-requisites are essen-

tial on the part of the membership. The degree of the success of the meeting will be largely determined by the cooperation of the listener and the speaker. Remember the speaker will be your guest; he will endeavor to enlighten and instruct you. As a listener in the audience don't feel that your responsibility as a host is lessened because you are apparently lost in the crowd. Be quiet and attentive until the speaker has finished. The Program Committee has only been your agent in bringing these guests to Des Moines. Make it your individual duty to be as thoughtful and as courteous to these "strangers within our gates" as though you were responsible for their entertainment in your home. Make each guest feel the warmth of your hospitality. Thus will the Diamond Jubilee Anniversary reach its greatest point of efficiency and wave back to the state at large the hospitality of the Iowa profession.

Reminiscences

On Thursday evening, following the addresses, a formal presentation of guests and past presidents will take place, after which Charles Ryan, M.D., will be in charge of the program.

At that time an opportunity will be given to the members, more especially those of rather mature and mellow years, to entertain their fellow members with stories of interest pertaining to their medical experiences. Every physician well knows that with age comes wisdom, with wisdom comes experience, and with experience comes humorous situations in the practice of medicine; so fair warning is hereby given to all concerned that a prize will be given to the member who relates the best story pertaining to actual personal experience while in the line of professional duty. Any one intending to compete for this prize, and doubting the propriety of his story, should not fail to have the same passed by the National Board of Censors before presentation. At this time, also, will be awarded a prize for the oldest member present, and a prize for the best exhibit of an antique medical or surgical nature.

Old Time Exhibit

In the August 22, number of the Journal of the American Medical Association of last year appeared an article "The Old Time Country Doctor", written by the son of a country doctor, Dr. William Allen Pusey. Members of the medical profession who have been fortunate enough to be raised in the home of a country doctor can better understand, perhaps, the hardships which surrounded the old family doctor as he went about on his errands of mercy. His surgical appliances were crude as compared with those of today; his therapeutic receptacle was the saddlebag, not the alligator hide satchel. As many of the younger men of the profession have had little, or no opportunity of seeing the various surgical and medical appliances of fifty or more years ago, the Arrangement Committee has decided to offer a prize for the best old time exhibit. Space in the exhibit room will be set aside for this purpose free of charge. Any member who possesses or has access to anything of an antique medical or surgical nature is entitled to bring the same to the Diamond Jubilee Anniversary and put the same on display. By so doing he will serve to educate the younger generation of physicians, add interest to the meeting, and may be the fortunate one to carry away the prize. Bring in your antiques.

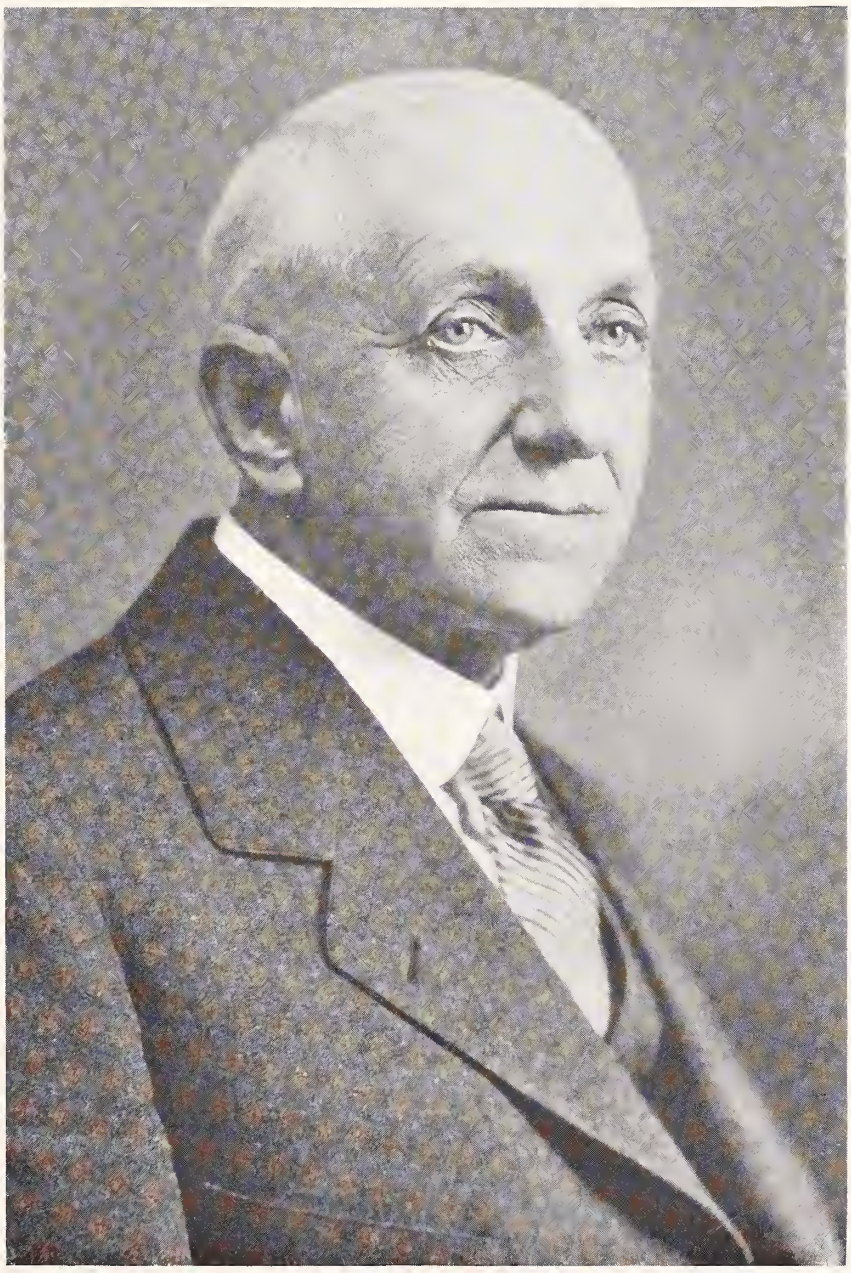
Registration Cards

A few years ago the Secretary of the Society endeavored to simplify the matter of registration of members at the annual sessions by reminding each member that the presentation of his membership card would save both time and bother to all parties concerned. Such a procedure was entirely in keeping with the registration tactics long in use at the registration desks of the American Medical Association. At first a few of the members thought the card presentation was out of harmony with the spirit of the State Society and its laws, but reference to the by-laws, showing the necessity that all members must register in order to take an active part in the proceedings of any given session, very quickly dispelled all criticism of a personal nature. Each year has witnessed more members being thoughtful enough to bring their membership cards. For this thoughtfulness the Secretary is appreciative, and he trusts this year that the vast majority of members will not forget this important item. If you do not carry your membership card get it now, make a place for it among your personal effects, and bring it to the Des Moines session. By so doing you will save both time and annoyance. Owing to the unusual program this year the largest attendance in the history of the Society is anticipated; hence the cooperation of members will be greatly appreciated that the work at the registration desks may proceed with promptness and efficiency.

Meeting of the House of Delegates

Owing to the fact that a special program has been prepared in recognition of the Diamond Jubilee Anniversary, I have been instructed by the President, Dr. Smith A. Spilman, to call the attention of the members—especially those who will serve as members of the House of Delegates—to a called meeting of the House of Delegates on Tuesday, May 11, 1:30 p. m., at Hotel Fort Des Moines. A feeling that most of the officers and delegates would prefer to listen to the program uninterrupted by legislative duties has actuated the President to make use of his prerogative and to issue his order for a called or pre-sessional meeting. Accordingly the routine work of the House of Delegates will be taken care of on Tuesday, with the disposal of all remaining matters on the afternoon of Friday, the last day of the general meeting. All officers, delegates, members of committees, and members otherwise interested will kindly take due notice of the dates of meeting—May 11 and 14—make plans accordingly, and be present that the work of the House of Delegates may proceed with precision and despatch.

Tom B. Throckmorton, Secretary.



Smith A. Spilman, M.D.

President
Iowa State Medical Society
1925-1926

Program Committee

PRINCE E. SAWYER, M.D.
CHAIRMAN
SECTION ON SURGERY

SMITH A. SPILMAN, M.D.
PRESIDENT

EDWARD T. EDGERLY, M.D.
CHAIRMAN
SECTION ON MEDICINE

ELMER P. WEIH, M.D.
CHAIRMAN
SECTION ON OPHTHALMOLOGY,
OTOLOGY AND RHINOLARYNGOLOGY

TOM B. THROCKMORTON, M.D.
SECRETARY

ADDISON C. PAGE, M.D.
TREASURER

Our Guests

OLIN WEST, M.D.
CHICAGO

ALBERT R. MITCHELL, M.D.
LINCOLN

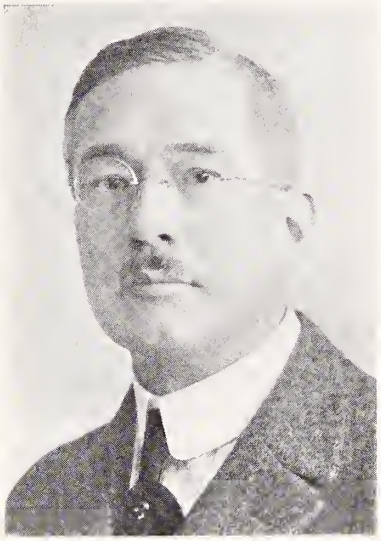
WILLIAM JAMES MAYO, M.D.
ROCHESTER

ALLEN BUCHNER KANAVEL, M.D.
CHICAGO

MAX AARON GOLDSTEIN, M.D.
SAINT LOUIS

Our Guests

CHARLES ADDISON ELLIOTT, M.D.
CHICAGO

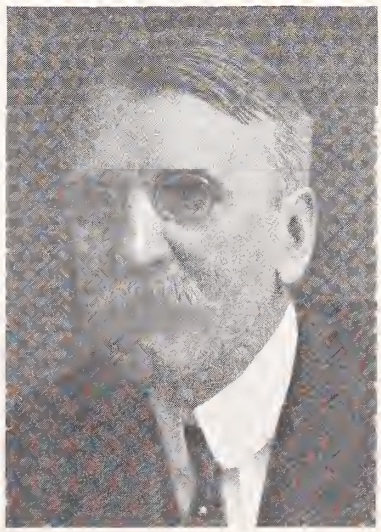


GEORGE ELMER PRICE, M.D.
SPOKANE

WILLIAM ALLEN PUSEY, M.D
CHICAGO

PAUL DUDLEY WHITE, M.D.
BOSTON

FRANKLIN PAUL GENGENBACH, M.D.
DENVER



JOHN BLAIR DEAVER, M.D.
PHILADELPHIA

THE DIAGNOSTIC NET—SURGICAL VIEWPOINT*

Paul A. White, B.S., M.D., M.S., F.A.C.S.
Davenport

Dr. Harold L. Foss in a trenchant editorial recently in Surgery, Gynecology and Obstetrics under the title, "The Treatment of Adolescent Goiter", said in the opening paragraph, "There is nothing more to be deplored than the surgical operation performed unnecessarily. It is, of course, a well known fact that operations, for which there are no actual indications, are being performed daily, operations which do nothing beyond withdrawing something from the patient's store of health, a store which is often small enough".[3]

Dr. W. J. Mayo at the meeting of the American College of Surgeons, in Chicago two years ago, was quoted as saying that of the 180,000 physicians in the United States 40,000 are attempting to do surgery while not over 10,000 are competent surgeons.

These are indictments of the medical profession that carry a poignant sting. If they are true, and it is hardly believed that they can be successfully denied, they point toward possibilities for considerable improvement in future practice. To submit to an unnecessary operation in incompetent hands is too much to ask of the most willing patient.

We are concerned, however, with the first consideration—the avoidance of unnecessary, unhelpful, even if not especially harmful operations. The basic and very trite principle upon which the accomplishment of this rests is the determination, as near as is humanly possible in the light of present day scientific development, of a definite diagnosis.

Dr. Dean Lewis remarked on one occasion that in his conception of medical practice there were many ways of treating cases, by surgery, internal medicine, x-ray, radium, etc., but only one way of making a diagnosis. Every physician seeing a patient carries that responsibility.

Dr. William A. Pusey[4] in a series of recent articles, attempting to solve a passing phase in the rapid evolution of medical practice has presented some potentially dangerous suggestions that might considerably delay medical progress. His plan to shorten medical training, if it produced less competent medical practitioners, in its purpose of supplying rural sections, would be subversive of aspirations for better diagnostic developments. It would lend little encouragement to the use of more intensive methods at our disposal for reaching definite conclusions regarding hidden pathology. None of us want poorly trained men in rural locations, much less the people whose lives may depend on their ability. The need will be for men better trained in intensive diagnostic methods and understanding of the indications for the various laboratory and special examinations that may throw light on the problem in hand.

The means of carrying out these procedures must become more easily available. To have them attainable for everyone means coordination between the physicians in the rural sections, general practitioners, and those having the equipment and thorough training in the use of that equipment that is necessary to reach high levels of efficiency in diagnosis. Coordination will be the keynote of future medical practice. How this is to be accomplished probably no one knows. That it is inevitable is clearly written. The development of the system of hard roads will probably be one factor in its accomplishment. Organization of clinic groups, over the country (some of them successful), is another product that cannot be ignored as a prospective part of the frame-work for the future super-structure. The marked development of specialism may be but the evolvement of integral units that some day will be fitted into the whole.

The personal and financial equations remain yet to be solved. Individualism in medicine must to some degree be effaced. There is the beautiful thought of the family physician carrying cheer to his clientele, solving unaided his manifold problems, and delivering 100 per cent efficiency to those dependent on his decisions, but the bald facts are that it cannot be done. He is attempting now to reach for that which should be organized to flow readily into his hands. He is trying to guide his patient through the diagnostic maze; an x-ray examination here, urological investigation there, a nose and throat man perhaps, and the neurologist in prospect. Too often he finds that lack of coordination leaves out that factor most to be desired—an evaluation of the whole, while the costs to the patient in each new adventure have been steadily climbing.

Not every patient is a proper subject for intensive investigation, but should be considered potentially so. Dr. Billings lulled the profession a few years ago with the assertion that over 80 per cent of the practice of the ordinary physician could be satisfactorily and scientifically handled without special equipment. Even if this were true there remains 20 per cent with a liklihood of incurring advanced pathology, unless the patients

*Address of the Chairman, Section of Surgery, Seventy-Fourth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 13, 14, 15, 1925.

assume the initiative and take themselves to an organization for intensive investigation. This often happens and the reason lies in lack of coordination in the home field.

With these ideas in mind we have conceived of the modern method of approach to diagnostic problems as analogous to the spreading of a net. Every patients' condition is a mystery to be solved. Every pathological entity like a fish in the sea has its presence inferred from hearsay evidence, from previous experience of the investigator and others. The modern procedure then is to so surround the problem in the diagnostic approach that there will be no escaping of the desired conclusion. Often there is information as unexpected and startling brought up in the diagnostic net as the product disclosed when the fishing net is dragged into view.

The grouping in Chart 1 shows the fabric of which the net is made. It is not presented as a complete summary of all possible diagnostic procedures but leaves little unlisted. It is a wonderful structure and when we realize that most of it has been brought into being during the past forty years we cease to wonder that the medical profession has not as yet reached a state of coordination that will most efficiently make use of it.

To make other than a systematic approach in diagnosis is to court failure if not disaster. In a diagnostic center recently, where, if anywhere, complete systematic investigations are made, a prominent lawyer of that state was about to be dismissed as well. Two years and a half previously he had come complaining mainly of hematuria. Wishing to save him what is sometimes considered the burden of routine procedures, cystoscopy was done without the usual preliminary examinations which include x-ray of the kidneys, ureters and bladder. A papilloma in the base of the bladder was found, sufficiently accounting for the hematuria, and fulguration of this was done. He returned at intervals for observation and on his last visit was about to be discharged in spite of a slight persistence of red blood cells in the urine when someone as a routine procedure before dismissal had a kidney, ureter, and bladder x-ray done, disclosing a large round stone in the left kidney pelvis.

It is commonplace to remark about the value and necessity of a complete history and physical examination preliminary to any special work, yet how difficult to carry out in daily practice. No special investigation should be considered previous to such examinations for only thus may unnecessary work be avoided. An erroneous laboratory or x-ray report has often started a wrong that a history and physical examination would have made right.

Dr. Billings said in a recent discussion,[2] "I wonder if you are aware of the lack of physical examinations of the sick. I had always been struck by the fact that patients who stripped sometimes did it reluctantly and often made a remark that they had never been unclothed for examination before. * * * During two years * * * over 75 per cent of the total patients had never had their clothes off in an examination and every one had suffered from a chronic disease".

The selection of special examinations will be dictated by the symptoms presented and the difficulties in clinical differentiation. The value of a negative result in a special examination should be emphasized. These procedures find greatest usefulness sometimes in ruling out the organs that are susceptible of examination by direct methods, leaving for clinical experience and diagnostic acumen those that may not so be examined. In gall-bladder disease, for example, or appendicitis with gastric symptoms, bowel disturbances, and possibly urinary irritation it is of great assistance to know definitely that the stomach, colon, and kidneys, which may be examined by direct methods, are practically normal.

If special examinations do nothing more, they delay the final decision while judgment ripens. Further contact and acquaintance with the patient separates his peculiarities from his pathology in the examiner's mind. It is remarkable how great a change will occur in one's conceptions concerning a patient's trouble during these processes.

Charts 2, 3, 4 and 5 present cases illustrating the practical application of the Diagnostic Net as outlined in Chart 1. For brevity, only positive findings are recorded in the physical examination. Chart 6 illustrates a rather extreme use of diagnostic processes in an attempt to unravel the mysteries of a patient's misery, in a reported case. Chart 7 is a summary of the results in the use of special diagnostic measures with 1180 patients personally examined in the Mayo Foundation. It is shown here in a striking way, in the high percentage of negative results from these examinations, how useful they may be made in difficult differential diagnosis.

CONCLUSIONS

1. We have available a wonderful group of special diagnostic processes, the use of which is often necessary to establish a definite diagnosis.

2. The attainment of a definite diagnosis, as nearly as possible, is the greatest protection the physician and the patient have against unnecessary or misapplied surgery.

3. A careful history and complete physical examination should always precede investigation along other lines.

4. The organization of medical practice for the future must make highly specialized examinations available to all physicians and through them to the public, removing the present stumbling blocks, apparent to all, that now prevent such close cooperation.

5. Coordination will be the keynote to future medical practice.

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Chart 1
THE DIAGNOSTIC NET

CLINICAL EXAMINATIONS

1. **General Scrutiny**
   - Manners
   - Dress
   - Expressions
   - Reactions
   - Previous Diseases
   - Occupation Hazards
   - Injuries
   - Operations
2. **History**
   - Family
   - Marital
   - Menstral
   - Chief Complaint
   - Clinical History
3. **Physical Examination**
   - Height
   - Weight
     - Gain
     - Loss
   - Temperature
   - Pulse
   - Blood Press.
   - Skin
   - Teeth
   - Tonsils
   - Pupils
   - Glands
   - Thyroid
   - Breasts
   - Heart
   - Lungs
   - Abdomen
   - Liver
   - Spleen
   - Rectum
   - Genitals
   - Hernia
   - Spine
   - Joints
   - Knee Jerks
   - Babinski
   - Extremities

SPECIAL EXAMINATIONS

1. **Laboratory**
   - Urine
     - Routine
     - Special
   - Blood
     - Routine
     - Special
       - Differential
       - Platelets
       - Coagulation
       - Grouping
       - Fragility
       - Sugar
       - Sugar toler.
       - Urea, etc.
       - Widal
       - Culture
   - Wassermann
   - Sputum
   - Smears
   - Stools
   - Test Meal
   - Duodenal Contents
   - Kidney Function
   - Salivary Urea
   - Tissue Diagnosis
   - Liver Function
   - Basal Metabolism
   - Spinal Fluid
   - Skin Tests
     - Von Pierquet
     - Schick
     - Proteins, Poll.
     - Scarlet Fever
   - Electrocardiograph
2. **Urological** (Diagnosis—Differential Diagnosis)
   - Cath. Urine (female or residual)
   - X-ray—Kidney, ureter, and bladder
   - Cystoscopy
     - Differential specimens
     - Differential function
       - Phenolsulphon.
       - Indigo carmine
     - Pyelogram
3. **Neurological**
4. **Eye, Ear, Nose and Throat**
5. **Bronchoscopic**
6. **Esophagoscopic**
7. **Proctoscopic**
8. **X-ray** (Foreign bodies) (Pneumoperitoneum)

Teeth	Esophagus	Colon
Sinuses	Spine	Stomach
Bones	Sella	Ventricles
Chest	Pyelogram	Gall-Bladder

Chart 2
THE DIAGNOSTIC NET

Case 1. Boy; Age 5

CLINICAL EXAMINATIONS

1. **General Scrutiny:**
   Child, face flushed, crying, holding both hands over abdomen, knees drawn up, rolling from side to side.
2. **History:**
   Became ill at play three hours previous to examination, vomited several times, complained of pain in the abdomen, and cries most of the time.
3. **Physical Examination:**
   Temperature 102°, pulse 120, skin flushed, respiration difficult to interpret, apparently tender over whole abdomen especially the right side. Other regions including the lungs negative.

SPECIAL EXAMINATIONS

1. **Laboratory:**
   Urine—Negative.
   Blood—Leukocytes 31,500.
8. **X-ray:**
   Chest—(Not made)

COURSE: Operation seriously considered; delay; several re-examinations; after five hours findings were as before except now: temperature 105°; leukocytes 41,000.

DIAGNOSIS: Pneumonia—with referred abdominal pain.

Chart 3
THE DIAGNOSTIC NET

Case 2. Male; age 39; Married 10 Years; Farmer

CLINICAL EXAMINATIONS:

1. **General Scrutiny:**
   Looks well, fits stated occupation, phlegmatic, probably would under-state rather than exaggerate symptoms.

2. **History:**
   Operations: Appendectomy, 6 years ago; adhesions, 4 years ago.
   Chief Complaint: Pain and ache right side of abdomen.
   Clinical History: For seven years pain and ache along right side of abdomen rather indefinite as to radiation but perhaps to genitals when most severe; aggravated by working, lifting, etc.; no colics.
3. **Physical Examination:**
   Height, 5-7; weight 160 (no change); temperature 98°; pulse 70; blood-pressure 130-80.
   Abdomen, scar of oblique incision right lower abdomen; otherwise negative.

SPECIAL EXAMINATIONS:

1. **Laboratory:**
   Urine—Few pus cells; occasional red blood cell.
   Blood—Hemoglobin 80%; red blood cells 4.50; leukocytes 9000.
2. **Urological:**
   X-ray—(Kidney, ureter, and bladder) shows hook-shaped shadow 1 x ½ cm. in lower central portion of kidney outline; right side.
   Cystoscopy—Bladder, ureteral openings normal; both sides catheterized easily.
   Differential specimens—Right; occasional pus and red blood red cell. Left; negative.
   Differential function—Right 12%; Left 10%; (fifteen minutes; phenolphthal).
   Pyelogram—Right includes shadow in lower calyx; (Sod. Iod. 12½%).

DIAGNOSIS: Stone in right kidney pelvis 1 x ½ cm.; function good; probably will pass a stone of this size, spontaneously.

COURSE: Three months later had severe colic followed by fever and ill for three weeks. Pus and blood in urine. X-ray later showed stone down ureter four inches. In attempt to dilate ureter with garceau catheter stone was pushed back into pelvis of kidney, then removed by operation.

Chart 4
THE DIAGNOSTIC NET

Case 3. Male; Age 62; Married 39 Years; Retired Farmer

CLINICAL EXAMINATIONS:

1. **General Scrutiny:**
   Sallow, cachectic, weight reduction, phlegmatic, intelligent.
2. **History:**
   Chief Complaint—Weakness, loss of appetite, loose and dark colored stools.
   Clinical History—Began to tire easily ten months ago, more definite seven months ago with loss of appetite, feeling of heaviness after meals, and vomited once or twice. Soreness of mouth and tongue, loose and occasionally dark colored stools. Progressive loss of weight and strength. Three months ago noticed numbness in hands and fingers.
3. **Physical Examination:**
   Height, 5-7½; weight, normal 175, now 139; temperature 98°; pulse 70; bld. p. 140-90. Skin sallow, weight reduction marked; tongue, glossitis 2; abdomen, no tenderness or mass made out.

SPECIAL EXAMINATIONS:

1. **Laboratory:**
   Urine—Negative.
   Blood—Hemoglobin 38%; red blood cells 2.60; leukocytes 11,900; polys. 70%. No abnormal red blood cells.
   Wassermann—Negative.
   Test Meal—Total acids 44, free acid 20.
3. **Neurological—Negative.**
8. **X-ray**—Stomach, negative. Colon, large filling defect in cecum lateral wall.

DIAGNOSIS: Malignant growth of cecum; secondary anemia.

Chart 5
THE DIAGNOSTIC NET

Case 4. Male; Age 50; Married 20 Years; Druggist

CLINICAL EXAMINATIONS:

1. **General Scrutiny:**
   Looks well, phlegmatic temperament, makes light of his troubles.
2. **History:**
   Chief Complaint—Mass in right upper abdomen.
   Clinical History—About five years feeling of heaviness after meals with some distention; mild ache across upper abdomen at times extending around to flanks on both sides. Difficulty with bowels at times as though passage of contents interfered with. Frequency and burning urination for several days at times.
3. **Physical Examination:**
   Height, 5-6; weight 153 (no change); temperature 98.4°; pulse 80; bld. pr. 160-90.
   Abdomen—Mass 15 cm. x 7 cm. in right upper quadrant, moveable toward mid-line, not tender, descends slightly on inspiration.
   Rectum—Prostate moderately enlarged.

SPECIAL EXAMINATIONS:

1. **Laboratory:**
   Urine—Occasional pus cell.
   Blood—Hemoglobin 80%; red blood cells 4.30; leucocytes 10,000.
8. **X-ray:**
   Kidney, ureters, and bladder—Negative.
   Stomach—Negative.
   Colon—Negative. Mass extrinsic.
2. **Urological:**
   Cystoscopy—Bladder, ureteral openings, spurting, all normal.

Differential specimens—Negative.
Differential function—Normal.
Pyelogram—Normal.

DIAGNOSIS: Mass is probably gall-bladder.

COURSE: Operation disclosed hydrops of the gall-bladder with three large stones and one smaller blocking the cystic duct.

Chart 6
THE DIAGNOSTIC NET

Case 5. Male; Age 56; Married 20 Years; Salesman

CLINICAL EXAMINATIONS:

1. **General Scrutiny:**
   Pale and sick looking, moderate loss of weight, fretful.

2. **History:**
   Chief Complaint—General malaise, fever, occasional twinges of pain in right lower quadrant of the abdomen, and from one to three loose, watery stools daily.
   Clinical History—Five months has had irregular loose stools with fever and chills. Pain diffuse over abdomen and in right lower quadrant. Began at first after heavy drinking; relieved; then continuous since vaccination 3½ months ago.

3. **Physical Examination:**
   Height, 5-8; weight, formerly 160, now 150; temperature 99.4°; pulse 80; bld. p. 112-68.
   Tonsils—Septic looking.

Chart 7
THE DIAGNOSTIC NET

Summary of Examinations in 1180 Cases*

SPECIAL EXAMINATIONS

	No. of Cases	Results Positive	
X-ray—			
Head	20	7	(35%)
Teeth	262	84	(32%)
Chest	344	83	(23%)
Stomach	169	37	(22%)
Esophagus	5	0	
Colon	65	8	(12%)
Kidney, ureter, bladder	129	13	(10%)
Bone	388	187	(48%)
Wassermann (52% examined)	616	19	(3%)
Neurologic	126	54	(42%)
Cystoscopic	64	29	(45%)
Proctoscopic	19	13	(68%)
Complete blood count	25	11	(44%)
Electrocardiogram	20	17	(85%)
Sputum	49	9	(18%)
Stools	35	9	(25%)
Miscellaneous—			
Duodenal contents	2	2	(100%)
Grouping	15		
Fragility	5	2	(40%)
X-ray of the gall-bladder	15	1	(6%)
Widal	2	1	(50%)
Blood sugar	6	1	(16%)
Vaginal smear	2	0	
Throat culture	1	0	
Plasmodia	1	0	
Spinal puncture	22	5	(22%)
Protein sensitization	7	5	(71%)
Blood urea	5	0	
Metabolism	3	0	
Barany	3	2	(66%)
Coagulation	2	1	(50%)
Von Pierquet	2	1	(50%)
Guinea pig inoculation	2	0	

DEATHS

Patients operated on.....	7
Patients not operated on.....	2

GENERAL STATISTICS

Total number of patients	1180	
Patients operated on after examination	420	(35%)
Patients operated on previous to examination, mostly elsewhere	384	(32%)
Patients operated on after examination who had had previous operations, mostly elsewhere	145	(34%)
Patients operated on previous to examination who came with the same complaint as before operation	137	(35%)

Oldest patient	76 years
Youngest	1 month
Average age	37 years
Males	656 (55%)
Females	524 (45%)
Married	746 (63%)
Widowed	55 (4%)
Single	434 (37%)

DIAGNOSTIC ERRORS IN 420 PATIENTS OPERATED ON

Frank error	7 (1.6%)
Partial error (operative diagnosis differing in some respects)	17 (4%)
Partial error concerned gall-bladder	12 (70%)
Total cases in error	24 (5.7%)
Error concerned the gall-bladder in	12 (50%)

*Patients examined in the Mayo Foundation.

Abdomen—Sensitive generally, no mass made out.

SPECIAL EXAMINATIONS:

1. **Laboratory:**
   Urine—Negative.
   Blood—Hemoglobin 50%; red blood cells 3.43; leukocytes 10,500, polys. 77%.
   Platelets 214,000; volume index 0.83. Wassermann—negative. Widal—negative.
   Urea—40%. Culture—negative.
   Test Meal—Total acids 10; free acids 0.
   Duodenal Contents—Light, 600 units urobilin; dark, 600 units urobilinogen, 2200 units urobilin.
   Kidney Function—40%.
   Liver Function—Retention grade 1 (phenoltetrachlorphthalein).
   Stools—Entameba histolytica found.
3. **Neurological**—Negative.
7. **Proctoscopic**—Negative.
8. **X-ray**—Chest, negative; stomach, negative; colon, negative.

DIAGNOSIS: Amebic dysentery; secondary anemia; achylia.

COURSE: Emetin hypodermically, dilute hydrochloric acid by mouth, and coal oil enemas relieved the symptoms.

MORBID ATTITUDES AND BELIEFS*

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The program of the present meeting is an interesting document covering a wide field of intensive medical study. To the reader, passing abruptly from joints to hearts, from inflammation to metabolism, it comes as a shock to find a paper on Morbid Attitudes and Beliefs sandwiched in between one on anomalous peritoneal bands and another on transplantation of the ovary. He may wonder whether the paper has been inadevertently misplaced, or whether it is perhaps an intentional transplant.

Transplants have the best chance of thriving where there is an actual organic need of the special tissue and this paper, if viable, will perhaps indicate that the contribution of psychiatry is an organic need of modern medicine. The presence of the paper on the program is a healthy sign, even though the presentation of the topic may be far from adequate.

Peritoneal bands and transplanted ovaries are tangible and visible; attitudes and beliefs seem to many elusive and nebulous. Mental attitudes and beliefs, however, are just as solid facts as structural anomalies; we have a more immediate knowledge of their existence than of our anatomical peculiarities; the extent to which morbid attitudes and beliefs cripple and distort the individual life is considerable. Some might consider that the topic belongs more to the philosopher or the moralist than to the physician; but attitudes and beliefs are to be looked on as one aspect of the adaptation of the individual to the environment, it will study the laws underlying the formation of morbid attitudes and beliefs, it will be interested in their treatment and prevention.

The attitudes and beliefs of an individual are the individual himself as he reacts to the more complex aspects of the environment; they can only be understood when we study the personality in its complexity and the situation which it has to deal with.

In internal medicine we consider the adaptation of the individual to the environment in so far as it involves physical, biochemical, bacteriological factors, an adaptation in which the chemical and nervous integration of the various systems plays an important role. There are, however, other demands made upon the human organism than the ability to assimilate nutritive material, to ward off microorganisms, to dominate the physical environment in varied climes and under the most diverse circumstances. Man has to adapt himself to the conditions of social life; he has to establish some sort of harmony between the conflicting tendencies of his own nature. Primitive appetites conflict with cultural demands; day-dreaming and phantasy conflict with objective observation and logical thought; development of the personality is subtly modified by the influence of parents, siblings, spouse, children; association with others in school and work may involve difficulties of various types; each man with his own special abilities and disabilities has his own destiny, which may include bereavement, loss, disappointment, unsatisfied desires. In fact of these demands many resort to evasive and inferior modes of adaptation, and under the influence of emotional needs distorted and phantastic beliefs may arise.

The origin of a distorted attitude may frequently be traced to influences or experiences in childhood; this is especially true in regard to the attitude towards sex and all its ramifications, and the literature of the last twenty years has furnished an ample case material dealing with this topic. In this case material we see how the early promptings of the sex instinct and the experiences of the child are important factors in the

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moulding of the personality; early success or failure in relation to the assimilation of this factor may have a profound influence on later adaptation; undesirable experiences may result in an acquired immunity or an unfortunate sensitization. Early influences frequently tend to associate the topic of sex with a feeling of impurity, contamination, guilt, inferiority, and there accumulates a reservoir of distressing emotion, which hampers the free development of the personality. The chronic discomfort arising from this source may be neutralized by the individual in various ways. Thus the disturbing feeling of impurity may be balanced by an exaggerated attention to physical cleanliness; as a patient said, "after a bath I appear better in my own eyes, I feel fresh, it is something symbolic". Or the individual, to get away from what is of the senses and animal, may strain after undue intellectual activity and devote much time to rather unproductive speculation. Religiosity and artistic dilettantism may have their source in the same blind effort to extract the sting from nature's promptings. The young man who derived satisfaction from the symbolic value of the bath was devoting himself to a career in philosophy. Another man, of homosexual tendency, was also a student of philosophy, an idealist; his dissertation had been on a phase of idealism, "I am idealistic, submit everything to the highest standards". When his sex nature was stirred by a young companion, he gave a high mystical value to this emotional turmoil of familiar biological origin. "I felt that spirit could conquer anything—I dwelt in pure contemplation, in contemplation of pure goodness —in rapture—in contemplation of the good he could do." Prudishness is one of the most familiar attitudes of defense and self-deception in face of the dangers that assail from within. The feeling of inferiority which results from the unequal struggle of the immature individual with the powerful racial instincts may leave a deep imprint on his adult personality; undue sensitiveness and seclusiveness, unhealthy day-dreaming, self-deception may neutralize the efficiency of an otherwise rich endowment and render the individual peculiarly vulnerable to some of the inevitable shocks of life. On this soil the psychoneuroses flourish and every specialist, medical and surgical, sees many invalids whose handicap owes something to these factors. In many cases later difficulty would have been prevented if the child had been helped to a healthy understanding of the simple problems of human nature, and had not been left to muddle along blindly in relation to a major issue of life.

Of fundamental importance in determining the later attitude of the individual towards fellow workers and the social group, towards those in authority in various fields, towards the problem of mating is the relationship between child and parents. The attitude of the spoiled child is familiar; accustomed to obtain satisfaction in the family circle by tantrums and other forms of self-assertion, he is ill prepared to deal later with a world, which does not accept his claims. A robust constitution may, after a trying period, submit to the discipline which has been unfortunately postponed; a less fortunate endowment, chilled by the encounter with an apparently harsh and unsympathetic world, may cling to a feeling of its intrinsic superiority, and see in the behavior of others evidence of crudeness, lack of sympathy, antagonism or jealousy.

There are other ways of spoiling a child than by oversolicitude and lack of discipline; he may be spoiled by too much repression. The feeling of inferiority originally developed by a dominant and intolerant parent, may become a permanent attitude of the adult personality, and seriously influence important decisions.

The influence of the parent is however much more subtle than what is expressed in home discipline. The whole scheme of emotional values adopted by the parents and expressed in their daily behavior affects the growing child and moulds his outlook on life; the child tends to see with the eyes of the parent; his affections are deeply involved in their personality. The individual frequently does not realize that he has carried on into adult life an attitude of childhood, that he is still haunted by memories of the particular emotional dependence of that period, that he still reaches out for something which will duplicate the old relationship. It is especially in relation to mating that the influence of this attitude may be traced. Some never marry because life with the parent or with the memory of the parent satisfies their needs; others tend to marry someone who in personality or in some more superficial way recalls the parent, even although the match may obviously be most undesirable. Thus the young daughter of an alcoholic may marry an elderly alcoholic. In other cases even a suitable match may be a sad failure owing to the persistence of the childhood attitude, the obscure basis of much incompatibility, of depression, disappointment, resentment, physical invalidism. The individual himself may have little understanding of the unrest which periodically assails him, and which may express itself in odd moods or in some disorder of conduct. Thus in a married man with waves of depression and episodic alcoholism, the instability in his emotional life and his lack of

complete satisfaction in his marriage seemed to be largely due to his unusually intimate relations with his mother, whom in the late teens he had nursed and from whom at twenty his aunt undertook to wean him. The same deep affection for a dead parent seemed to be a disturbing factor in the case of a young woman of twenty-seven; under the spell of his memory the ordinary affection of others seemed to her unsatisfactory, the suggestion of a proposal would terminate a friendship. Hampered by her own inner difficulties, she preferred to see the fault elsewhere and felt that the world was abusing her.

The attitude towards the parent carried over from childhood into adult life may be one not of affectionate dependence but of antagonism and this antagonism may express itself in many fields. One may find the individual, with a history of early difficulty with the parent, disinclined as an adult to accept dogma, heterodox in religion, radical in politics, restive under any display of authority. He may pride himself on his exaggerated individualism, not realizing that it is the residual of a childhood attitude, which may long since have ceased to be appropriate.

While the parent as a restrictive force may call out in the child certain important reactions such as the above, the parent is not immune from the dangers of the situation. Not content to live his own life, the parent is liable to encroach on the next generation, wishing unconsciously to relive his life in the life of the child. He thus may avoid his own early faults, have pleasures denied in his own youth, develop vicariously talents which he has always felt were never given a fair chance. The parent without academic training is too apt to insist that his son must have a college education; the self-made man may wish his son to have without effort those things he himself struggled for; the mother, sensitive as to past experiences, may too anxiously guide her daughter past difficulties, which are given undue importance. This attitude towards the life of the child plays an important role in the adaptation of many parents. They do not always realize that they are living the life of another person, and that their own individual life is being seriously narrowed; when the child leaves the home for his or her own independent career, the parent may pass through a period of morbid depression.

A woman of meagre education who had married a college graduate was living an apparently stable life, compensating for early indiscretions by religious devotion, and for her own meagre education by the college education of her daughter. To a large extent she was reliving her own life in the life of her daughter. When the daughter frankly accepted Darwinian theories, and made the mother realize that she was an independent being with her own life to lead, the mother had a severe reaction; in her acute need she reached out for comforting religious beliefs, felt she was specially inspired by God, and under this belief carried out peculiar symbolic activity.

It would be easy to give further examples of the disturbing effect on the mother's balance of a daughter's emancipation, either through marriage or some declaration of independence similar to the above. It is true that in many cases even marriage may not modify the attitude of the parent, who continues to demand from the married child the same emotional relationship which has previously existed. Thus the attitude of the parent based on her personal needs may go far to spoil the new situation and in the resultant triangular situation any one of the three members may show the strain by symptoms of the most varied nature; these symptoms are apt to be treated superficially, with no realization of the fact that their roots lie in complicated mental attitudes.

The examples of morbid attitudes so far given have touched the problems of sex and of family adaptation. The wider problems of social adaptation, if not solved satisfactorily, may also give rise to morbid attitudes, thus handicapping personal development, and even laying the basis for later nervous and mental disorder. In our relations with our fellows a feeling of inferiority may develop, just as it may in relation to the control of the appetites. The feeling of inferiority may express itself directly in a timid, self-distrustful attitude, or it may give rise to a surface attitude of quite the reverse type; thus many a rather assertive, aggressive individual who is by this behaviour arousing antagonism, is really attempting to compensate for a feeling of inferiority. The reaction may lead to serious anti-social conduct; a very efficient burglar was found on arrest to be a school boy whose daring escapades had no motive of ordinary gain behind them, but were a compensation for a feeling of inferiority due to a physical handicap which made him the butt of his schoolmates. It is always well to keep this possibility in mind, when dealing with perplexing wayward behaviour. The feeling of inferiority may arise in relation to any of those qualities which are of value in social life. The love of self, the tendency to self-assertion, the desire of the various amenities of life make each one of us in greater or less degree, sensitive to any defect in our equipment and to our position in relation to our fellows. From an early age and in many ways each one may feel himself handicapped in

the race with his fellows. The child may have some physical handicap, a deformity, a limp, a speech defect, some variation from the normal in his appearance; he may have less money to spend than his fellows; he may belong to a racial or religious group that is treated with little consideration; he may be rather dull mentally, or clumsy physically, or unduly timid and sensitive to pain.

The feeling of inferiority need not be crippling; in many a personality it furnishes a stimulus to extra effort and is a spur to the vigorous pursuit of power, of wealth, of holiness, of abstract truth. It is not always the best endowed or those most favored by circumstances who achieve the greatest success.

Instead of finding some satisfying external activity to compensate for our special handicaps, we may seek comfort in a subjective way, which leaves the actual situation unchanged but makes it more tolerable to us. If devoid of social graces, we may talk slightly of "the dancing man"; if we have brains, but no brawn, we decry athletics; if dull intellectually we refer with mild amusement to the "high-brow" and the pundit; if routine clinicians, unable to carry out keenly an experimental investigation, we make light of research; if temperamentally unable to deal with the raw material of suffering humanity, in the wards we seclude ourselves in the laboratory and talk with condescension of the "mere clinician"; if we have little of the milk of human kindness, we belittle the kindly practical philanthropist, call him an "uplifter"; if we are sentimental enthusiasts living on facile emotions, we may do scant justice to those careful workers, who realize that social progress is a matter of slow evolution. The man who has no merriment in his soul refers to the innocent hilarity of others as the "crackling of thorns under a pot". This morbid attitude of self-satisfaction and depreciation of others may be partly of individual and partly of social origin; considerations of casts are still potent forces, subjectivity is not always fostered by the atmosphere of the family, the social group, the school, the college. Patriotism and chauvinism are apt to be confused; to see the defects of one's own group and the merits of one's rivals is by some considered to be a moral blemish. It is not always realized that there is a sounder basis for truthfulness and honesty than the fact that one is a Smythe or a De Vere, and that to base the claims of virtue on an appeal to caste feeling has drawbacks. It must be recognized that a great variety of social groups derive comfort from the assumed inferiority of those whose tastes and customs and ethics differ from their own; the group mind is not immune from morbid attitudes and it is difficult for the individual to emancipate himself from the group bias.

While thought may thus pander to our prejudices at the expense of our fellows, on the other hand it may bring comfort and may foster cheerful acceptance of hardships and loyal social cooperation. In virtue of the magical quality of thought, directed by subjective cravings rather than by objective observation and logical elaboration, man may see the otherwise intolerable reality as merely a trifling detail in the foreground of a picture of the universe painted with the colours of his desires. Thus envisaged and transformed, a world of barren force and hateful inequality fades away, and in its place appears a spiritual world, in which the role of the individual is of transcendent importance. A religious or philosophical solution of personal difficulties may transform an embittered or crippled individual into a useful member of the social group. For such a result the religious solution must not be too individual, it must conform to the general lines of an already existing creed or, if novel, it must make a sufficient appeal to the needs of others to be acceptable to more than merely a few extremists.

In many individuals thought directed by underlying wishes fails to attain this socially acceptable form and through this failure the individual is left isolated, with a barren system of beliefs which offers him no bridge over his personal difficulties to a working social adjustment. Because these beliefs are so individual and leave him isolated, they are considered by his fellows to be morbid, although they may intrinsically be no more illogical nor irrational than many widely accepted beliefs. They are simply the indication of a deep-seated difficulty of adaptation, and like so many other so-called symptoms of disease they are nature's attempt at cure.

The importance of the analysis of morbid beliefs varies very much in different cases. In some cases they may be of rather incidental interest, throwing light it is true on underlying trends of the personality, but not having much to do with the real onset of the disorder. Thus a man of forty-seven, who had shown periods of over-activity and underactivity, during convalescence from pneumonia claimed that he had millions, boasted of a wonderful voice, said that he would make an excellent president of the United States. Such beliefs are sufficiently close to the normal over-estimation of self not to present any great difficulty of interpretation; in this case they were able to come to naive expression thanks to the influence of the physical ailment on

the highest functions. Such disclosure of the furniture of our mind is most familiar perhaps in acute alcoholism—*in vino veritas*—but it may be elicited by any other factor which disturbs the higher integrations, e. g., an anesthetic, an infectious disorder, emotional turmoil. Much of interest in human nature in general is revealed by the ideas which flit over the stage in the delirium incidental to many physical disorders; thus the claim to be Christ is met with very frequently as a fleeting idea in many disorders, and shows that a messianic ambition is more widely diffused than would be indicated by the few patients in the fabric of whose beliefs a fixed delusion of being Christ is a central figure. Ideas of spiritualistic nature are toyed with by many people in whose mental life they are more or less of a luxury, an idle distraction, or a pleasant stimulant; the same ideas may be called on seriously to satisfy the deep-seated needs of others, bereft or thwarted, who have not had the good fortune to find a more wholesome solution of their problems. Unfortunately, those who dabble freely in such beliefs for the sake of the pleasant stimulation they receive therefrom, do not realize that they are by their attitude encouraging the use of these stimulants in others of less robust mental constitution whose balance may thereby be seriously upset.

The following case is cited to show how thought may prove the servant of desire, and may elaborate products which are individual and eccentric and which may interfere with healthy social adaptation. The patient, a man of fifty-two, had received a meagre education on account of deafness in childhood; poorly educated, deaf, ungainly, he reacted to these limitations in a vigorour way. He used big words, engaged in pretentious reading, studied medicine and phrenology; he wrote a book of fiction (unpublished), "How the Matrimonial Agency Failed", a poem "Basic Aims", and in a third book he dealt with such major problems as War, Morality, Sex Distinctions. He attempted somewhat late in life to compensate for his social uncouthness by taking dancing lessons, he had to hire his partners; he found that nobody "developed his steps logically", nobody could keep up with him, he was the fastest dancer in the world. An excellent craftsman he patented some toys, the last of which was an ingenious "fire-lighter"; his self-esteem was much heightened by the consideration that this "fire-lighter" might be used for arson on a large scale. His advertisement said "it may be used to carry on an effective warfare against society without danger to one's self. It is the only morally effective instrument which a man can have and is very important in the struggle against greed and the exploitation of the masses". Such an attitude while comforting to the patient was evidently very unfortunate from the point of view of social adaptation, and could hardly be considered a solution of his personal problem compatible with an unsupervised social existence.

Another patient showed a similar development of rather pretentious claims, but without the same ominous trend to his views. He also was deaf, had been invalided for tuberculosis; during a brief fast he had felt particularly buoyant; he read some physiology, and on this flimsy basis he published a pamphlet "Health for All. Explaining the Principles of Nutrics and Vitamin. (This book guarantees cure in any non-epidemic disease and assures to you long life in health by easy method.)" How often does one read in current medical literature communications of which the basis is only slightly more substantial than that of the above pamphlet, and the explanation of which is to be sought in the psychology of the author! The patient had felt dissatisfied with himself in relation to the sexual problem; this manifested itself in undue suspicion of the morality of his sister, and in the desire to guide and improve others. This had inspired two pamphlets "The Life Guiding Facts About Love, Courtship and Marriage", "The Married and Those Who Marry Take Heed".

In the cases above discussed the influence of underlying emotional factors upon overt attitudes and conscious beliefs has been shown, but the structure of the patient's thought is still logical, the physician has little difficulty in thinking himself into the patient's point of view.

One of the most fascinating studies is that of the attitudes and beliefs of those who are not only disturbed by deep-seated trends, but whose ideas are no longer expressed at the level of adult logical thought. In such cases there crop up attitudes and beliefs, not cast in logical mould nor easily comprehended by normal minds; they are apt to be considered as the random fragments of a broken vase, scarcely worth intensive study, but the close scrutiny of these beliefs suggests that we may be dealing with no random fragments but with modes of thought, which at one period were primitive man's reaction to experience, and which have long since been superseded by our more efficient modern mental processes. The ideas of our patients have close kinship with the modes of thought of childhood and of primitive man, and their emergence during a mental disorder shows how there slumbers beneath the surface of modern consciousness all sorts of primitive mental creatures, which once roamed freely across the surface. An unmarried woman, who had for several

years fought a losing battle against the rising tide of her discontent, at last took refuge in the hospital. One may refer to a few of her utterances "If I marry just the right man, everything will be all right; if not, the end of the world will be the ice age, all cold"; here we see no separation of man from inanimate nature, but one process which sweeps through all, and the chill of her own future may just as well be expressed in the wider setting of the ice age, as in reference to the narrow personal part of the total experience. The same lack of any division between psychical and physical forces is again seen in the following: "What can we do to bring back the sun? It is gone. I must keep the sun going. If I am higher up on the fifth floor of a building I can call back the sun. When I was in the bath my spirit went out to many worlds. The sun is life." "The sky changes with my mood; when my mood is blue the day is dark." "When I went to the sun parlor the sky became dark as though the atmosphere were in opposition to me." "Harmony must be established between the stars.—I thought matter was alive. I thought planets were jealous like human beings." Nature, fellow-patients, animals, herself, all seem penetrated by occult forces; "I must go to the toilet, for if I don't the girl over there will die"; another patient who disrobed entirely was referred to thus, "I felt as if the girl opposite was the spirit of the earth, and as if she were trying to ally herself with me by strange ways". "We are related to nature in a much more close way than we think." At a later period as she looked back on this mode of experience from the vantage round of improved health she said, "I thought everything was animated; the animals have a spirit, they understood us. I felt a great kinship between the animated world and myself. I looked at the horses in the bridle path and they seemed to prance. Perhaps it was only by accident, but I like to think it was true". In the upheaval of the patient's nature the creative force, which had been denied expression in real life, now expressed itself through the medium of phantasies of varied nature. Thus certain shadows seemed to confirm the vague annunciations from the depths of her nature; "I think that they meant to say that in me the perfect man was not completed yet; in me the Father and perhaps the Son, as I was willing to sacrifice myself, but that knowledge or perhaps love—I don't mean passion but more general love; charity was a child in me". The symbolic expression of her creative yearnings is again seen in the following account of her breakfast; "there was an egg wrapped in a napkin, a dark red rose partly faded, some cereal, I can't remember, some coffee. I thought I should not eat the egg, as if it were a symbol, as if it contained the germ of life and the rose the symbol of passion. The cereals were as bread, the symbol of food. I took the rose, the sun was shining very brightly, and it was a strange thing that when I took it in my hand it stood as a fresh rose. It was as if I were all penetrated by the power of giving life to things". Again she said "in me I thought there was the embryo of the complete man".

The above examples may serve to show that morbid attitudes and morbid beliefs, whether expressed in logical or more primitive form, are merely an indication of the difficulty of the individual, with his own special endowment and past experiences, in adapting himself to the situation which confronts him. In face of these symptoms, which he has been accustomed to consider as nebulous and bordering on the metaphysical, the physician is tempted to resort to physiological hypotheses, often of very doubtful validity. The present communication would encourage him to realize that he can help his patients, if he remain on a sound biological basis, and be willing to take an interest in actual human nature, its past evolution, its present conflicts. The general practitioner, who is sufficiently interested to give to his patient the time necessary for the study of the real life difficulties of the latter, may be surprised to find how greatly the sphere of his usefulness to the community has been extended.

PANCREATIC DISEASE—WITH CASE REPORTS*

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Having had the opportunity of seeing and studying a number of patients afflicted with diseases of the pancreas, I have chosen some of the disturbances in this gland to discuss with you. The changes taking place when this organ is affected can truly be classed as some of the mysteries of the abdomen. Accurate information of the diseases that affect the pancreas is the result of investigations made first by Cawley in 1789. He called our attention to the coexistence of diabetes and pancreatic disease on account of finding multiple calculi in the pancreas of a patient suffering from diabetes, but thought the lesions of the gland the result of the disease and not the cause of it. Fat necrosis accompanying acute pancreatitis was first described by Balser who noted it first at autopsy in 1879, but to Fitz is given the credit for showing to the profession

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the importance of infections of the pancreas. In 1877, Lancereaux formally announced the theory of pancreatic disease as a clinical entity and the theory was first firmly established as a fact by the experimental work of V. Mering and Minkowski in 1889. More recent workers have shown the true pathology and physiology of the pancreas. Opie in 1901 described clearly the pathological changes taking place in the pancreas following the impaction of a gall-stone in the ampulla of Vater. Since this time he has added much to our knowledge by experimental work.

Flexner showed that the injection of gastric juice and many other substances into the pancreatic ducts will produce acute pancreatitis. Macleod, Banting and many more of our research physiologists and pathologists have given us our most recent and reliable information of the gland.

The findings in the cases reported here have been obtained in the operating room at the elbow of the surgeon or in the necropsy room. Many more cases of definite pancreatic disease have been seen and studied in the necropsy room than in the operating room, as my earlier days in the study of medicine were spent as resident pathologist in a large city hospital.

Since the pancreas is an organ deeply placed in the upper abdomen sheltered by the ribs and adjacent organs, it is rarely injured except in deep penetrating wounds or by severe violence in the epigastrium causing a crushing lesion in the gland. Its locality is not so favorable in respect to infections. The pancreas is placed in a bad neighborhood where infection can reach it readily from all organs in the upper abdomen. These injurious agents may reach the pancreas by direct extension of some inflammatory process in an adjacent organ, by the blood or lymphatic system or through the ducts of the gland.

Acute and chronic inflammatory diseases, with case reports will be discussed in this paper.

Deaver states that acute pancreatitis is one of the most serious of the acute abdominal catastrophies and is too often wrongly diagnosed. Here the delay of an hour or two may cost the patient his life. Dieulafoy has termed it "the acute pancreatic drama". Previous to the recognition of this disease and since its description as a disease entity deaths resulting from this disease when no exploratory or post-mortem examination have been made were reported as "acute indigestion or acute cardiac failure".

Fitz in his monograph in 1889 reported twenty-ty-two cases. Korte later reported forty-one cases. Of these reported cases thirty were in males. Linder reports 76 per cent females in a series of thirty-three cases. Deaver 73 per cent females in a series of eleven cases. According to Bohms large statistics about 65 per cent of cases occur in men. Peiser cited 121 cases of acute pancreatitis of which 79 were in males and 44 in females. Acute pancreatitis generally is a disease of adult or past middle life, although it has been found in the young. McPhedran reports a case in a child nine months of age. Brewitt and Korte have reported a successful operation on a patient sixteen years of age.

Among the predisposing causes obesity, gall-bladder diseases and alcoholism must be given the most prominent place. Among eighty-three cases of acute pancreatitis collected by Williams and Busch, obesity was distinctly noted in fifty. When acute pancreatitis is found in the young it is usually in the hard drinker. This has been noted by the writer in post-mortem examinations on a large number of coroner's cases and in old alcoholics in charitable institutions in spirit days. Gall-bladder disease is associated more frequently with chronic pancreatitis. In an early report from the Mayo Clinic pancreatitis as a complication of gall-bladder and tract disease occurred 359 times in 4000 cases, 27 per cent of the cases having stones in the common duct had pancreatitis complications. Acute pancreatitis was found seven times. Of the eighty-three cases of acute pancreatitis reported by Williams and Busch, thirty-three were associated with gall-stones. Opie in forty-three cases has shown an association of gall-stones and acute pancreatitis. Nine of these cases had a stone in the common duct near its termination in the ampulla of Vater. Williams and Busch have thought that the passage of a gall-stone into the duodenum might dilate the opening allowing the duodenal contents access to the pancreatic duct and to the pancreas.

Reports also show that acute pancreatitis may occur in a patient previously suffering from chronic pancreatitis. Musser has reported acute pancreatitis as a complication of typhoid fever. Other infectious diseases have been associated with acute pancreatitis, such as influenzas and mumps. (In France I saw one young adult suffering with severe abdominal pain as a complication of mumps.) Degenerative blood-vessel changes predisposing to hemorrhage into the gland and secondary infection and digestion must be considered a prominent factor in the production of acute pancreatitis. It is difficult to determine whether an infection causes the hemorrhage or the hemorrhage is primary and the infection a secondary factor. In the study of a large number of cases of post-mortem specimens degenerative changes of the blood-vessels are noted where little artriosclerosis is found else-

where. Trauma causing a perforation and permitting the pancreatic secretions to escape into tissue with lowered resistance associated with hemorrhage and infection is a known cause of this disease. Abscesses by direct extension from the kidney, spleen or gall-bladder and infected emboli are classed as factors in the production of the disease. Deaver and Arnsperger have suggested the most common route of the infection to the pancreas as being through the lymphatics from the gall-bladder bile ducts, stomach and duodenum.

No doubt the main causes of acute pancreatitis are infections causing activation of the trypsino and lipase ferments within the gland and self-digestion of the tissues. Carnot shows that under abnormal conditions leukocytes and bacteria act as activating substances to trypsinogen and when this is formed within the pancreas it will have the power of digesting the surrounding protein material. According to Opie the regurgitation of bile into the duct of Wirsung as the result of a powerful contraction of the sphincter of Oddi at the ampulla of Vater, in response to irritation arising in the surrounding viscera, is the essential factor in some cases.

One can be sure of the diagnosis in this disease only by seeing and feeling the suspected organ. The changes found vary with the intensity and duration of the process. In an early case very little change can be noted except a swollen and congested pancreas. In a few hours there is usually found a sero-purulent exudate, sometimes blood-stained. In most of the cases, areas of fat necrosis are found in the omentum, mesentery and peripancreatic fat. The necrosed areas vary in size from a millimeter to a centimeter in diameter and appear as white opaque areas and have been mistakenly called miliary tubercles at times by surgeons.

This fat necrosis is due to the splitting of fats into fatty acids and glycerin by lipase that has escaped into the tissues, from the pancreatic gland due to its perforation. The glycerine being absorbed and the fatty acids deposited within the fat cells. According to Langerhans the fatty acids combine with calcium salts to form soaps. Hemorrhage may be absent or limited to small spots scattered throughout the organ. In late cases hemorrhage into the pancreatic tissue is an almost constant finding. The hemorrhagic areas may be sharply circumscribed, small and scattered, but often the hemorrhage involves the whole gland. The organ is much enlarged and dark in color and usually softer than normal. In less acute cases necrosis and hemorrhage may be followed by suppuration, a definite walled off abscess resulting.

Symptoms—Prodromal symptoms in the nature of digestive disturbances, stomach or gall-stone cramps are said to exist in 70 per cent of cases, but usually the acute symptoms arise so suddenly and are of such a severe nature, that the patient is unable to give a detailed history of his previous illnesses. If the patient recovers, by careful questioning, one can obtain quite a definite line of symptoms. If the patient dies, this can be elicited from friends.

Sudden pain in the epigastrium is a constant symptom and may be so severe as to cause faintness and collapse. In some cases the pain is less severe and is colicky, with intervals of cessation. It may radiate to the back or to any part of the abdomen. Women compare the pain to labour pains. It is only partially relieved by large doses of morphine. It comes on frequently after eating a full meal.

Vomiting is an early and important symptom. It follows closely after the initial pain and is repeated so frequently as to resemble that due to acute intestinal obstruction. There is usually considerable nausea and retching, the gastric and duodenal contents being brought up only with difficulty. The extremities are cold, the pulse is rapid, weak and thready and the expression anxious. Lividity of the face is often a conspicuous feature. The bowels are obstinately constipated. The temperature may be normal or slightly elevated.

Physical examination of the abdomen reveals tenderness, distention and muscular rigidity, all of which are marked in the epigastrium. The mind usually remains clear but muttering delirium may develop. Jaundice is of a rather frequent occurrence in acute pancreatitis, either from primary calculous obstruction or secondary from compression of the bile ducts by the diseased pancreas. A moderate leucocytosis may be present. The urine is scanty and rarely contains sugar.

Prognosis—Mild cases of acute pancreatitis often recover but severe cases may end in death within a few hours. The severe shock and collapse in these cases has been attributd by Whipple and others to proteose absorption resulting from self-digestion by the trypsin action.

Korte reports sixteen operations with five deaths.

Balch and Smith eleven operations with eight deaths.

Deaver seventeen operations with four deaths.

Opie collected twenty-five cases of Halstead and Hahn with two recoveries.

Differential Diagnosis—Conditions from which acute pancreatitis must be differentiated are: acute intestinal obstruction, perforated gastric ulcer or duodenal ulcer, embolism of the superior mesenteric artery, acute gastritis due to some metallic irritant, gall-stone colic and appendicitis. While each of these conditions have quite a definite clinical picture when typical, yet it is only in the operating room and at the necropsy table where the accurate diagnosis is made.

Treatment—In view of the extreme difficulty in making sure of the disease and where every means has been used in making a diagnosis the patient's chances for recovery are distinctly better by surgical aid, and it is encouraging to note that the proportion of recoveries has increased in recent years by opening the abdomen and applying drainage to the affected area.

Case Reports

Condition Due to Arterial Degeneration

Mr. A. C. White, American, married, age forty-two. Complaint: Pain in the epigastrium with nausea and vomiting. Onset: Four hours before entering the hospital, patient was seized with severe, sudden pain in the back which rapidly spread to anterior thorax. Patient had just finished eating lunch at a restaurant when attack came. Pain was so severe that it was necessary to have aid in crossing the street to office. Morphine was given with little relief. Pain extended to upper abdomen. There is a great amount of belching and patient has vomited once during the last hour—4 p. m. leucocytes: 11,000; 7 p. m., 14,200; 80 per cent polys. Treatment: Laparotomy, pancreas found to be firm and swollen but there was no free fluid in the peritoneal cavity. The peripancreatic and omental fat showed small white areas of fat necrosis. Two drains were sutured in the peritoneum at the head of the pancreas. Patient rapidly recovered from the operation and enjoyed fair health for three months when after eating breakfast he had a sudden hemorrhage. Necropsy findings showing marked arteriosclerosis and luetic aneurism that had ruptured into upper lobe of the left lung.

Patient A. G., railroad conductor, age fifty-nine. Patient of Dr. Earl Bellinger, Dr. Macrae, consultant. Complaint on entering: Indigestion. Habits always good. For the past eleven years patient has had attacks of epigastric pain, bloating and inability to free stomach of gas. The distress may come on as late as four or five hours after eating and seems to have no relation to type of food taken. These attacks come on every six months or so and it requires morphine by hypo to relieve. These attacks last for about one week. Was jaundiced seven years ago during one attack. Yesterday at 4:10 a. m. just before eating a lunch, patient had a gnawing sensation in the epigastrium. After eating the lunch he still had a dull pain in the epigastrium associated with profuse diaphoresis. About one hour after the onset he felt nauseated and vomited three times before reaching home at 6 a. m. He continued to sweat and was given an enema which he retained. He was given four enemas yesterday which returned clear but in the evening he passed a small amount of feces and flatus.

He has had no chills, jaundice or fever with this attack. He has been unable to retain water and the vomiting is of the projectile type. This attack is similar to other attacks but more severe.

Leukocyte count: 23,000 to 28,000 with 92 per cent polys. Urine contained acetone, casts and albumen.

Physical examination: Abdomen—marked distention and tenderness. Tenderness more marked in epigastrium. No palpable masses. Blood-pressure: 154/90.

Four hours after admission to the hospital an operation was performed and extensive necrosis of the omental and peripancreatic and mesenteric fat found. There was free fluid in the peritoneal cavity. The gall-bladder was enlarged and filled with stones. The patient being in a very serious condition a drain was inserted. Death occurred forty-eight hours later.

Post-mortem: Examination three hours after death. Gall-bladder distended and filled with stones. Free bloody fluid in the peritoneal cavity. All parts of the omental and mesenteric and peripancreatic fat covered with whitish tallow-like area from one to two m.m. in size. There were several necrotic black areas in a swollen pancreas.

Diagnosis: Cholelithiasis, acute pancreatitis and fat necrosis.

Mrs. H., age twenty-five, housewife, fat. Complaint: Since several years ago, patient has had pain in the upper abdomen on the left which she attributes to distention due to gas. This has been aggravated since the birth of her first child four years ago. Usually with these upper abdominal symptoms there is pain in lower, right quadrant but not as severe in type. The pain is independent of food and is relieved by passing considerable gas by bowel. She denies that she belches much. At times patient has had pain under right costal margin which is not felt in back except when patient twists body or strains. No fever, chills, jaundice or urinary symptoms. Bowels usually regular. Leucocytes, 18,000; polys, 91; urine: albumen, 1 plus; acetone, 2 plus; diacetic acid, 1 plus.

Physical examination: Abdomen flat, nowhere distended or tympanitic. Over the gall-bladder region and appendix there is rather exquisite tenderness more pronounced at the latter point. There is no rigidity. No tumors or palpable organs. Blood-pressure: 124/74.

Appendix: Shows mesoappendix thickened. Blood-vessels prominent over surface. Hemorrhage areas in mucosa. Tip of appendix obliterated. Gall-bladder distended. No stones. Pancreas swollen to three times normal size. Small hemorrhage in omentum and mesentery. Diagnosis: Recurrent appendicitis.

Mrs. G., age twenty-five. Case of Dr. Augustine. Mother of two children, normal. Entering com-

plaint: Pain in the epigastrium, vomiting. This attack began on February 6th after eating supper. She was seized with a severe pain in the epigastrium with vomiting. This pain has continued and she has vomited everything, even water. She has had two previous attacks but none as severe as the present one. Bowels have been constipated. Had severe attack of jaundice in 1918. No history of typhoid. The pain in the previous attacks had no relation to the eating of food. This attack came on immediately after eating. No alkali or soda ease. Abdomen very tender all over but more in the epigastrium. Mass in gall-bladder region palpable but thought to have no liver attachment. Diagnosis: Pancreatic cyst.

The urine contained acetone and a trace of albumen. The leucocyte count was 10,000 to 17,000 with 82-86 per cent polys. Stool specimen was large and thin, yellow in color. An exploratory operation was done and there was found a great mass of adhesions about the head of the pancreas which was much enlarged and showed slight fluctuation on palpation. There were definite areas of fat necrosis in the peripancreatic fat, mesenteric and omentum.

A drain was sutured to the surface of the fluctuating mass and the bloody fluid aspirated and allowed to drain out. The patient was operated on February 18th and left the hospital apparently cured on April 6th, although there was still a sinus draining purulent material.

As in acute pancreatitis, so in chronic pancreatitis, the infection from the gall-bladder and its ducts seem to be the most common source of infection to the pancreas. The common bile duct is surrounded by the head of the pancreas in 60 to 75 per cent of cases and therefore is easily infected. The various inflammatory processes in the duodenum and stomach also afford an easy route for infection by direct extension. How often we see ulcers of these organs perforated into the pancreas setting up chronic changes depending on the severity of the ulcer! No case of acute pancreatitis has been seen from this source.

This condition of the disease is characterized by an increase of connective tissue and atrophy of the parenchymatous cells of the pancreas. Two forms are recognized, one in which the newly formed fibrous tissue is chiefly between the lobules, the interlobular type, the other type, the interacinar type. The interacinar type may be compared to the changes that take place in the glomerulus of the kidney under certain intoxications.

There is first a fibrosis and later hyaline degeneration of the acinar tissue and symptoms of a true diabetes. In the interlobular type there are not the symptoms of diabetes but symptoms of intestinal indigestion. These symptoms of intestinal indigestion are not found in the true interacinal type of chronic pancreatitis. The types may intermingle and then we may have a combination of symptoms.

Syphilis, infections and arteriosclerosis are factors in the productions. Warthin ten years ago reported before the American Association of Pathologists a number of cases in which syphilis was an etiological factor but syphilis as a factor in the production of diabetes is of minor consideration. Allen and Joslin both give infection a prominent place as an etiological factor.

Discussion

Dr. Fred M. Smith, Iowa City—Dr. Johnson has mentioned the difficulty of diagnosing acute pancreatitis. This is no doubt due to the relative infrequency of the condition and to the fact that it may simulate almost any acute abdominal condition. In the typical case of acute pancreatitis, the excrutiating upper abdominal pain is a striking feature. The distress is usually localized in the epigastrium and may not be relieved by morphine. Sometimes it may be transmitted slightly into the left. The associated collapse is also a feature that should be emphasized. The pain of acute pancreatitis may resemble that of gall-stone colic, acute perforating gastric or duodenal ulcer and may even be transmitted to the lower portion of the abdomen and thus be mistaken for acute appendicitis. The location and severity of the pain, and the fact that it may not be relieved by morphine should raise the question of the possibility of a coronary occlusion. There are certain features which should be emphasized in the differentiation from acute abdominal conditions. In perforated gastric or duodenal ulcer the physician is usually able to obtain a history of food distress. There is, in addition, invariably a spasm of the muscles of the upper abdomen. In acute pancreatitis, on the other hand. There is, during the early stage an absence of the muscles spasm, but perhaps more a sense of deep resistance. Ilius and intestinal obstruction are rare in this particular location. While in some instances of acute pancreatitis there may be a rather obstinate constipation, yet there is not the fecal vomiting that is associated with the former conditions. Furthermore, the patency of the bowel may be demonstrated by an enema. Mesenteric thrombosis may simulate very closely the picture of acute pancreatitis. The appearance of blood in the stools and the absence of the severe shock, characteristic of the latter are important diagnostic points. Because of the character and location of the pain in the upper quadrant of the abdomen and also anterior chest, acute pancreatitis may be confused with that of coronary occlusion. A careful history and physical examination will, however, invariably enable one to rule out, or establish the presence of a cardiac accident. The incidence of chronic pancreatitis has led to much discussion by internists and surgeons. It is true that there are instances of chronic pancreatitis in which the head of the pancreas is definitely increased in size. Cases have been reported in which the enlargement of this particular area of the pancreas has been

sufficient to obstruct the common bile duct. Some have recovered following the resection of the tumor mass. This particular type of pathology, however, is extremely rare as indicated by autopsy reports. On the other hand surgeons not infrequently report enlargement of the pancreas at the time of operation and make a diagnosis of "chronic pancreatitis". Oftentimes these cases later come to autopsy and the pathologist is unable to verify the surgeon's findings. This discrepancy is possibly due to the personal equation on the part of the surgeon and to some extent the pathologist, as to what constitutes enlargement of the pancreas. It is to be recalled that the surgeon is laboring under a great handicap due to the conditions under which he has to work. It is thus extremely difficult to detect small variations in the size of the head of the pancreas by the palpating hand. In conclusion, I wish to recall the two types of pathology associated with chronic pancreatitis: In one group there is an extensive interlobular fibrosis. This produces very little destruction of the islands of Langerhans and there is consequently no diabetes. This accounts for the relative infrequency of diabetes in chronic pancreatitis. In the second group there is a so-called interacinal type of fibroids, the island of Langerhans thus became involved and we have the clinical picture of diabetes mellitus.

Dr. D. J. Glomset, Des Moines—Dr. Johnson and Dr. Smith have said a great deal about the differential diagnosis of acute pancreatitis. Now, it may be possible to make this diagnosis, but it seems to me the only practical and safe diagnosis is to employ the surgical term "acute abdomen". I do not believe it is possible to make an absolute diagnosis of acute pancreatitis before you see it. You may think of it, but there are so many other conditions which simulate it that it seems to me the only safe way is to make a diagnosis of an acute abdomen and let the surgeon make the differential diagnosis, because a lot of valuable time may be lost in trying to develop a more accurate diagnosis by the available methods. I'll be switched, however, if I can see how a surgeon, when he is in the presence of an acute pancreatitis, can claim recovery as being a result of the operation. In the few cases of acute pancreatitis that I have observed I do not see how any drainage can relieve the condition present. I would like to second what Dr. Smith has said about making the diagnosis of chronic pancreatitis during operations upon the gall-bladder or the gall-ducts. I do not believe it is possible, and in some 3,000 autopsies that I have performed I have been surprised again and again to find how very rarely the pancreas is involved in diseases of the gall-bladder and the gall-ducts.

Dr. Emil C. Junger, Soldier—I always discuss a subject from the standpoint of the general practitioner. There are many sides to the practice of medicine, and it is impossible in a short discussion to cover every phase of a certain condition. In the country we see a few of these cases, but I like to go back of things. When Dr. Johnson, Dr. Smith and Dr. Glomset see these cases the patients have already been through our hands, we have seen them again and again and again. And I like to tackle the problem as it comes to us and see why we get all these "itises" that are coming up and developing. There are all kinds of "itises" indicated by pain, and if you know what a pain is then you know what an "itis" is. I would like to go back and find out why so many people are getting these end results, and pancreatitis is in many cases merely an end result. Some time ago Dr. Rosenow gave us a talk on the subject of end results in appendicitis and gall-bladder trouble, in the course of which he said: "Go to the tonsil and look, go to the teeth and look; do not tackle the end results, but the source of these conditions." That is what appeals to me this morning. What is the source of all these "itises" that are coming up and which these special men see, frequently after a full meal? Gentlemen, I think that is where the nigger is in the wood-pile—after a full meal. If we do anything in this country more than anything else it is eat too much, and when we eat too much and work too little, that takes most of us in. We then have an improper chemical digestion in the stomach and from there on down, and an improper bacterial digestion in the intestine, with the result that we have a lot of unsplit chemical products that circulate in the blood and locally cause irritation all the way along the blood stream, whence we get all these "itises". Why do we get sick anyway? Men sow, but seed does not all grow. Why not? Why do some seeds fall by the wayside where there is a hard track and cannot get started? Why don't we all get sick? The germs are here, we all take them in, but we haven't the proper soil. That is the reason we do not all get pneumonia, pancreatitis, and appendicitis. Some of us live in the country in God's fresh air and go out and eat a radish once in a while—something that grows in the garden. We do not patronize these quick lunch restaurants where they serve in ten minutes stuff no one can get away with. I am sick for a week after attending a meeting here. I start to cut out everything from the time I reach the town, going slow on preserved and short order stuff. You have a problem in the city because of the quick lunch artist, which those of us who live in the country do not have. Thank God. I don't envy you in Des Moines.

Dr. Donald Macrae, Jr., Council Bluffs—We know very little about the subject under discussion. It is up to the investigators and the men who make a study of these problems to bring scientific data before an organization of this kind in order that we may get the greatest good out of them. I am satisfied, too, that the idea of taking time enough to attempt to make a differential diagnosis even in an acute abdomen is very, very important. I do not know just what Dr. Glomset meant about that, but I do not think we should go so suddenly into acute conditions without first trying to differentiate. It is a scientific problem and extremely interesting. Even if we know that we have an obstruction of the intestinal tract we should try to determine what part is

obstructed. You wait only a short time, thirty minutes perhaps, to do this, and in many cases it is intensely interesting to go through this, and the more you try it the more efficient you become in making these diagnoses. I do not think it is impossible to make diagnosis of thrombosis of the mesenteric vessels. Only by constant observation can we become expert. One case that Dr. Johnson speaks of here and in which I was the unfortunate executor, in spite of the fact that it showed changes you might call chronic pancreatitis, I am satisfied that that was only part of his general condition, as the man died suddenly four months later of rupture of aortic aneurysm. The pain for which he was operated was the pain incident to changes in the coronary vessels, and other changes found at post-mortem following death from hemorrhages of the lung showed a tremendous aneurysm of the aorta which had burst into the lungs. We know that aneurysms and coronary changes of the heart in conditions of that kind, especially when due to syphilis, do simulate acute pancreatitis and an acute abdomen to such extent that we are justified in going into these bellies only after rapid but painstaking examination. If we had known as much before as afterwards I doubt if we would have attempted operation on the abdomen in this particular case. So we should give time enough to try to differentiate, attempting to get at the finer points, and the more we do this the better doctors we will be and with few mistakes marked to our discredit.

Dr. Johnson—I am very glad to have had this discussion. My only purpose in presenting the paper was to call your attention to a pathological condition that is mighty hard to diagnose. In my experience nearly all of the diagnoses have been made at the autopsy table or at the surgeon's elbow, and there is a definite clinical and pathological picture. I am sure that not all who open the abdomen are surgeons, that not all who open the abdomen are pathologists, and I bring this picture before you so that the men who do surgical work will be led to look a little closer at this pathological condition of diseases of the pancreas.

ANNUAL MEDICAL CLINIC

Dear Doctor Fairchild:

At the suggestion of Dr. Dean I am writing to many of our alumni and friends, calling special attention in this way to the excellent program we expect to put on at our approaching Clinic April 13 and 14 at Iowa City, but also the privilege of seeing some of the "Old Guard" here in the presence of Emeritus Dean Guthrie and professors Emeritus Bierring and Jepson. Besides all this, Dr. Howard, so well and favorably known over the state and so long with us, is to have a prominent place on our program—as well as Dr. McKim Marriott of Washington University College of Medicine. We always enjoy having you with us.

Dr. C. S. Chase.

THE EARLY RECOGNITION OF ARSENICAL POISONING DUE TO NEOARSPHENAMINE AND ITS TREATMENT*

Raymond S. Grossman, M.D., Marshalltown

It is not the purpose of this short paper to attempt to point out anything new, but rather to review the symptoms of arsenic poisoning, due to the administration of neoarsphenamine, and to emphasize the importance of their early recognition, and treatment.

Undesirable effects in the administration of treatment for syphilis were much more numerous under the earlier technic than they are at the present time. Statistics from Lier and Nicholas show that these may be reduced to a very small percentage if careful attention is paid to proper technic and the recognized contraindications. Yet, in the hands of the most cautious operator, accidents and serious reactions do occur which are not always easy to meet.

The immediate reaction, arsenic anaphylaxis, comes on during, or immediately following, the injection of the drug. It is evidenced by dyspnea, flushing of the face, very rapid, weak pulse, with possible collapse. Swift has reported experimental results with the serum of such patients, tending to show that the reaction is an idiosyncrasy due to a toxic combination of the injected drug with the serum. The treatment is that of surgical shock.

A reaction coming on six to twenty-four hours after the injection, known as the Jarisch-Herxheimer reaction, is best described as a lighting up of the symptoms of syphilis, associated with a brightening up of the skin lesions. It is accompanied by nausea, fever and vomiting. Gennerich believes this to be due to a liberation of endotoxins from the spirochetes killed by the drug. These two early reactions emphasize the value of a diminutive initial dose of neoarsphenamine.

Untoward reactions coming on several days, weeks, or even months after the injection are always to be viewed seriously and another injection should not be given for at least six months and then with extreme care, especially if there are signs of kidney irritation, jaundice, encephalitis or toxic eruptions, as dermatitis or purpura.

As a general rule the kidneys are not so easily affected by arsenic as by mercury, yet during the course of arsenical injections, urinary findings frequently show blood cells, albumen, casts and in rare cases, complete anuria. The injury done,

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according to Pears and Brown, is to the vascular mechanism of the tubules. The treatment is that of acute Bright's disease in addition to the withdrawal of syphilis treatment.

For many years past, jaundice which appeared during, or following, a course of treatment for syphilis, was considered a toxic hemolytic type due to the arsenic. Ormsby has stated that jaundice complicating syphilitic treatment indicates that the liver is involved and is due to the action of the arsenic on the liver cells. Milan in reporting seventeen cases of jaundice in the course of over 2000 injections, summarizes them by saying that jaundice usually appears about two months after treatment and states that it usually develops in those cases which have received insufficient treatment, so it is possible that not the arsenic, but the disease is responsible. Stokes, Wilhelm and O'Leary of the Mayo Clinic, point out that there is a definite infectious factor in many of these cases, independent of a lowered resistance of the liver from treatment for syphilis. They consider these cases to be mostly of the simple cholangitis type which respond quite readily to treatment. In their report of thirty-seven cases, 90 per cent cleared up under duodenal lavage. Their conclusions in these cases tend to show that arsenic is not necessarily the etiological agent in the production of this type of jaundice, but is due rather, to several causes; (1) infective hepatitis, (2) arsenical hepatitis going to atrophy, (3) syphilitic disease of the liver, or (4) obstructive jaundice, due to stones. Thus it appears that jaundice, complicating the course of syphilitic treatment is not to be viewed strictly as an arsenical poisoning but by lowering the body resistance, infective agents in the liver are encouraged to become active. As stated above, the most effective treatment used in the Mayo Clinic is (1) duodenal lavage, (2) sodium acid phosphate, and (3) oxgall tablets. Halliday and Sutherland of London reported a case in February, 1925, which cleared up with no other treatment than sodium thiosulphate, .45 gm. daily.

The most serious of complications during the treatment with arsenic preparations is hemorrhagic encephalitis, which, according to Ketzmer and Meirowsky, causes about 60 per cent of the fatalities. Ormsby and Jarmin, who have made extensive study of these cases conclude that it is due to three factors, (1) arsenical poisoning, (2) intolerance, and (3) Herxheimer reaction. It has been found that this complication is more frequent following large doses of the drug and also when the injections have been closely repeated. The treatment in general is that of cerebral hemorrhage.

One of the most common and most distressing of the untoward effects of the drug is the number of skin reactions occurring after its use. These usually manifest themselves by a rise in temperature, swelling about the eyes, injection of conjunctiva and, in a day or two, a fine scarletiniform eruption. It may be purpuric in type or may develop into an exfoliative dermatitis and persist for months. It is peculiarly chronic and obstinate. Moore and Keidel report a mortality of 27 per cent in a group of cases.

The treatment of these cases has been much more effective since the employment of sodium thiosulphate. Rivaut gave a preliminary report of its use in 1920 and in our own country McBride and Dennie gave a more detailed account of their experimental work. Their conclusions shortly stated, are "that the course of the dermatitis is shortened from months to weeks; that intravenous injections of the salt are preferable to all other methods of administration and are non-toxic up to a dose of 2 gm.; and that acute and chronic arsenical poisoning is rapidly controlled". They base their therapy on the previously known fact that the reaction is due to the arsenic, and is independent of the type of arsenic compound used and that it can best be combated by rendering the arsenic inert.

Sodium thiosulphate, a non-toxic reducing agent, in the process of oxidation frees ionic sulphur, which, reacting with arsenic or the heavy metals, precipitates the sulphide. This is insoluble and in the body is inert. The arsenic is, therefore, quantitatively removed as far as chemical action is concerned.

Sutton suggests the following dosage, given intravenously: .15 gm. as an initial dose, increasing .15 gm. daily until 1 gm. is given and continuing at this dosage daily as indicated by the symptoms.

SUMMARY

First—The early untoward effects of neoarsphenamine—anaphalyxis and Herxheimer reactions—are reduced to a minimum in occurrence and in severity by a small initial dose of the drug.

Second—Delayed reactions should always be considered seriously and early persistent treatment inaugurated.

Third—Sodium thiosulphate, given intravenously, is the most effective antidote especially in those cases in which there is a toxic eruption.

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Discussion

Dr. Clarence E. Van Epps, Iowa City—One effect of arsenical poisoning which the essayist did not mention is that brought about by Tryparsamide, because this drug has not been in circulation. It is now available, however, in general practice. We have tried it in four cases, and in each there have been disturbances of the vision resulting. This may appear after the second dose or any subsequent one and should make us very careful in regard to the use of the drug. Such patients should be examined carefully by an oculist before the Tryparsamide is given, and during the course of the treatment. He should be instructed to watch carefully for any blurring of vision and report it at once to his physician. Personally, I feel that we should be very careful in regard to the use of the drug. We have given in the neighborhood of 10,000 doses of some form of salvarsan in our neurological clinic, and aside from dermatitis we have had practically only one complication, and that was an encephalitis with a very severe onset but making a complete recovery in two years. We have had about twenty cases of dermatitis, of which six were serious and three fatal. The dermatitis may arise after the second or third injection, or it may not appear until after the course of ten injections have been completed. The dermatitis may begin around the elbow where we have given our injection, may appear as few papules on the back or as a generalized itchy rash. The important thing in the treatment of the dermatitis is the prophylaxis. Having learned the proper dosage for the preferred drug, one should be very careful about exceeding this amount. Before beginning the treatment, it is well to look over the patient's skin carefully so that you will readily discover the appearance of any new lesions. The patient should be instructed to watch for any new lesions and to tell the doctor as soon as any itching begins. With this safeguard, the dermatitis will be stopped in its earliest stage and should give no further trouble. Further treatment must be cautiously given. In a developed case, we have not found anything of special value. Sodium thiosulphate has not proven of definite value.

Dr. Murdock Bannister, Ottumwa—In two cases I have had reactions following the injection of sulpharsphenamine. In one there was pain in the epigastrium with nausea and vomiting which persisted over a period of about a week, and the patient eventually entirely recovered with no other symptoms. In the other case there was a severe reaction the second day after injection of sulpharsphenamine.

TRAUMATISM OF THE HEAD AND BRAIN IN CIVIL PRACTICE*

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The purpose of this paper is to present some of the conditions, treatment and end results of trauma of the head and brain which occur in civil practice. It is unnecessary to go into classification of head injuries mentioned by war surgeons and others, as they are far too numerous.

Trauma of the brain, as of other soft tissues, is followed by increased blood supply, with consequent edema, which give rise to increased pressure of the cerebrospinal fluid. As the cranium is a closed cavity, this increase of pressure reacts on the delicate brain structure, incurring damage which will not be repaired so long as this increased pressure persists. The immediate result of a severe wound of the head—more especially a gunshot wound—is a group of symptoms due to a widespread disturbance of function, affecting in varying degrees the whole cerebral and bulbar mechanism. Loss of consciousness of varying depth and duration, general muscular flaccidity, and disturbance of cardiac, respiratory and vasomotor action, are amongst the most striking of these general symptoms; but their exact pathological and mechanical basis is still imperfectly understood. Whatever this basis may be, the result is a suspension or disturbance of function from which recovery can take place spontaneously (except in patients who die outright or within a few hours). This is the stage of concussion or cerebral shock, with symptoms differing in no essential respect, from those resulting from penetrating wounds of the head, and with which is associated the stage of cerebral edema. The effects of this state may be aggravated by the presence of effused blood, which either mingles freely with the excessive cerebrospinal fluid, or becomes more or less localized or circumscribed. Experience, in a number of cases, has shown that such hemorrhages are very rarely large enough, either at once to threaten life, or to demand immediate operative interference. While the possibility of extensive bleeding must be remembered, it must not be permitted to loom too

*Read before the Inter-State Post-Graduate Assembly of America, Milwaukee, Wisconsin, October 27-31, 1924.

large. When hemorrhage of any consequence does occur, it is quite likely to be basal or inaccessible. It sometimes manifests itself after a duration of many hours, or even days, almost invariably giving rise to definite localized symptoms, superadded to those of the general compression. If the cerebral edema and swelling are severe, the symptoms may be relieved by lumbar puncture. Any progressive loss of function usually points to the necessity for affording free drainage of the damaged brain, as this loss may be due to a secondary inflammatory process, which may induce extension of the area with permanent damage. It is very difficult to secure efficient drainage of the damaged brain, because this tissue swells so easily in response to inflammation, while the extra room, which the cranial cavity is capable of affording is very small in comparison to this swelling. The questions might then naturally arise, in some of these cases, is a decompression operation essential, or would lumbar puncture not answer the same purpose? We are not dealing with a permanent source of pressure like a tumor, but with a process which is self-limiting, provided the medulla is not implicated. It is well recognized that in these conditions of cerebral contusion, the brain shows a marked tendency to absorb fluids and become edematous and often the cerebrospinal spaces contain an excess of blood-stained fluid. From observation it has become apparent that relief, sometimes, is afforded by a withdrawal of fluid. In cases of general compression, unless occasioned by progressive hemorrhage, relief by operation is not indicated, as the compression can usually be kept within bounds by repeated puncture. If loss of function is due to shock effect, recovery will usually take place.

The following cases may very well illustrate the condition amenable to withdrawal of spinal fluid by means of puncture.

The first two cases were girls, one fourteen and one sixteen. About ten days apart they were both struck by automobiles. Both were unconscious, from three to four hours, and semi-conscious for twenty-four hours. There were no scalp wounds except some bruises. The neurological symptoms were nervousness, restlessness and tossing, nausea and crying, pulse rapid and weak. Twenty-four hours after the injury, a spinal puncture was done, withdrawing about thirty c.c. of fluid which was almost pure blood, expelled with much force at the beginning. The fluid was allowed to flow until it began to drip and the pressure was relieved. Each case presented about the same symptoms. X-ray revealed nothing except a small fracture of the occipital bone of the fourteen-year-old girl with no displacement. A spinal puncture was done on each girl every forty-eight hours until the fluid cleared up and the pressure relieved. This required four different tappings in each case. They were both given a smart purge of calomel followed by a saline laxative. The head from the beginning was completely and continuously enveloped in ice. The patients were kept quiet in bed for six weeks, to prevent any future complications. During a period of about six months no complications have developed and both girls are attending school in the usual way. We know, however, that time enough has not elapsed to feel that they are safe from future trouble.

The third case was a child four years of age, who fell from a second story porch, striking its head on the cement walk. The child was brought into Baylor Hospital profoundly unconscious, and remained so for twenty-four hours. He had a large hematoma on right side of head; a perpendicular fracture line could be easily made out; x-ray revealed large fracture on top of head extending perpendicular on left parietal bone, also on right parietal curving into the right orbit. There was no displacement of bone, but the fracture had a tendency to gap open. Lumbar puncture revealed the spinal fluid to be almost pure blood, which was expelled with much force. The patient was treated in the same way as the two preceding cases. The spine was tapped every forty-eight hours until the fluid cleared up and the pressure relieved. Ice caps were applied to the head and the bowels given attention. The child was under observation for about two years, though doing well, at intervals he displayed a slight nervousness.

If the effects of cerebral contusion are confused with shock, the condition may not improve until trepanation makes possible the evacuation, from the intracranial chambers, of the clots and pulped brain, which are the occasions of pressure symptoms. For illustration, there is the so-called bursting fracture (comminuted) with widespread cerebral contusion. These cases can undoubtably be best relieved by a properly conducted decompression. Massive fractures of the skull may occur without actual laceration of the scalp. These are the cases where withdrawal of fluid is, probably, but a temporizing measure, and gives only a brief period of relief, for the former degree of tension is regained, in a very short time, by the accumulation of fluid. In such cases it is probably better to do a subtemporal decompression combined with lumbar puncture.

This condition may be illustrated by the following cases:

A boy fifteen years old was struck on the right side of the head, by a wooden float, which fell from the top of a standpipe seventy-five feet in height. A part of the parietal and temporal bones were broken away, and two or three large fragments were driven into the brain tissue, causing it to bulge into space, with a loss of a small amount of brain substance. The boy was profoundly unconscious for

twenty-four hours, bleeding at the nose and right ear. The pulse was almost imperceptible. He was not accessible to a hospital and was immediately operated in the home. Bone fragments were removed from an area of three and one-half by two and one-half inches. The dura was closed incompletely and the scalp was brought together providing for drainage. The patient recovered rapidly and in three weeks he was out of bed. The end results were good. It has been fifteen or more years since the accident. He is married and is holding a good position in a railroad office and has had no complications resulting.

The second illustrative case was a Russian Pole—a baker by trade—twenty-nine years old. He was attacked by an assassin, struck on the head by a blunt piece of iron which fractured the left malar and temporal bones. He immediately showed marked pressure symptoms, subnormal temperature, pulse 40 per minute, respiration slow, and he was profoundly unconscious. He was bleeding at the left ear, left eye and nose. These symptoms lead me to believe that I had a basal fracture with pressure to deal with. The usual half-moon incision was made over the left temporal revealing a comminuted or bursting fracture. The fractured bone was removed from a space of about two inches in diameter. A line of fracture was leading down by the ear into the base of the skull and probably into the middle fossa. The dura was seen to bulge as the bone was removed. When the dura was excised a stream of bloody fluid spurted some six or eight inches high, on account of the great intracranial pressure. Some small clots of blood were also removed from under the dura. The pulse began to improve immediately, even while under the anesthetic. The dura was partially closed with fine catgut, carefully leaving sufficient opening for drainage. A small drain rubber protective was placed in the angle of the incision and the scalp closed in the usual way. Ice caps were kept continuously to the head and the patient was given the usual laxative remedies. The rubber protective drain was removed in forty-eight hours. This man was semi-conscious for about seven days; stitches were removed on the eighth; no infection occurred; patient left hospital in eighteen days, contrary to my wishes. At the present time he is well and actively engaged in his trade as a baker.

The great danger of infection of a compound fracture of the skull is imperative, particularly when the dura underlying the fracture has been torn. Abscesses may form on the cerebral hemisphere or metastasis may occur in other parts of the central nervous system. The following case will illustrate this condition in a practical manner:

This young man's age was twenty. He was working in the field with an inmate of Terrell asylum, who suddenly attacked this young man and dug him on the head twice with a hoe, the blade penetrating the brain, producing a bad fracture. The bones were replaced in practically normal position by another doctor, but the scalp wound became infected from the dirty hoe. Soon after this the patient developed a complete paraplegia. He could not feel the prick from a pin, nor move a toe on either foot. We discovered some tenderness about the seventh dorsal vertebra, which we decided was a transverse myelitis or a secondary infection causing the paraplegia. Under local anesthesia the scalp wound was cleansed and drained thoroughly. The spinal canal was punctured, withdrawing three drams of clear fluid with only slight pressure. Ice was ordered to the tender spot on the spine, and a purgative given. The young man remained in the hospital for about ten days where he began to have slight movement of one or two toes. He was then removed to the Terrell sanitarium and was under the treatment of another doctor. He recovered seemingly completely in about four weeks. He is well; no complications whatever have developed and he has been accepted in the navy.

In chronic brain injuries, with depressed fractures of the vault, epilepsy may result months or even years after the injury. This is probably due, not so much to cortical adhesions, depression of the vault or foreign body spicules, but to a permanency of cerebral edema, which produces a chronic increase of intracranial pressure. The following cases may well illustrate conditions found in this group:

Case one was a boy sixteen. At six years of age he was accidently struck on the head with an iron rod, which produced a puncture fracture, just to the right of the medium line, and in the region of the upper end of the fissure Rolando. The exact time at which convulsions began was very indefinite, but he suffered with those seizures for six years. Then he was carried to another surgeon in a Texas city, and a small decompression operation was performed, using a transplant of a piece of fascia from the boy's thigh. The family stated that convulsions ceased entirely for eight months after the operation. The boy then began to have more severe and more frequent convulsions, than formerly. He would have perhaps six or eight in one night. He would fall; his left arm and leg would become numb and contract; he would be thoroughly unconscious. He would sometime shout aloud and curse, totally unconscious of his own behavior. These spells would last only a few minutes. When I first saw him at Baylor Hospital he presented the following symptoms: The skin was cadaverous, pale and anemic looking; he was very stupid, inactive, both mentally and physically, and wanted to sleep most of the time; the appetite was poor; temperature 100, pulse 110, respiration 24; his bowels and kidneys were normal. On examinations we found a depression on the head, a little to the right of the median line. This was the remains of the former operation. The usual half-moon flap was made in the scalp, dissecting it away from the old fascia latta transplant, which had grown

firmly to the dura, and also to the convolutions of the brain; the space was very much enlarged in the skull; the old transplant was dissected away from the dura, which was enlarged by cutting away a considerable amount of the dura proper, then, a very large transplant was taken from the fascia of the thigh, with all the fat possible, and placed in position over the brain, placing the fat next to the brain. The flap was tacked with three or four stitches of catgut to hold it in position. A few strands of silk worm gut were used for drainage, which were removed in forty-eight hours. The scalp was closed in the usual way. The wound healed by first intention, and the stitches were removed on the eighth day. For eight or ten days, the boy had an occasional light convulsion, these growing lighter each time until they ceased entirely. He seemed to recover rapidly, was bright and had no trouble with his hand or leg. He gained flesh rapidly. I was able to follow this case for two years; during this period, no trouble recurred.

The second case was a man eighteen years old, accidentally struck in the head with an ax, which crushed the skull for a distance of about two inches. In the course of a short time he developed epilepsy, convulsions occurring irregularly, but continuing through some three or four years. When he first entered the hospital we found a rather large, robust and healthy looking young man. We could not elicit a clear-cut history from the family. We made a decompression operation, finding a piece of bone pressing on the brain. This was removed and scalp closed. He was free from epilepsy for about one year, when the convulsions returned, seemingly as bad as before. In two years from his operation he returned for further treatment. A second decompression was done, which was very much larger than the first, hemorrhage was very troublesome. A fascia latta transplant was taken from the thigh, with all the fat possible, placed in position, with fat resting on the brain. The flap was tacked in position in the same manner as the previous case and the scalp closed in the usual way. Patient recovered and left the hospital after two weeks. Three years later the young man's father told me his son was perfectly well and had been so since a short time after the operation. He was performing heavy manual labor and making a living for his family.

In conclusion: It has become apparent that in many cases of acute injuries of the brain, without a depressed fracture or hematoma, that relief is afforded by withdrawal of fluid by lumbar puncture.

Second: In cases of head injuries, perhaps more than any other department of surgery, it is of cardinal importance for diagnosis and treatment to be kept in close and living association with pathology. In every case it is essential that the surgeon, before beginning the treatment, should make a determined effort to form the clearest possible picture of the actual condition within the skull of his patient.

Third: The premise may be laid down that in any case of injury to the head, where there is a temporary unconsciousness which passes away, and subsequently returns, there is a hemorrhage, probably attended by slow accumulation. If not relieved, this finally causes death of the patient, or permanently damaging the brain, destroys his usefulness.

Fourth: In cases with extensive injuries of the scalp and skull, with perhaps wide exposure of the brain, under proper treatment, the prognosis is always better than the extremely ugly appearance of the wound indicates.

Fifth: A massive fracture of the skull, with or without laceration of the scalp, is best treated by a decompression operation combined with spinal puncture.

Sixth: The ideal time for appropriate treatment of these patients having an increased intracranial pressure, is immediately after the cranial injury, when the shock has subsided.

BLOOD TRANSFUSION: INDICATIONS AND METHODS*

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The transfusion of blood tissue from the blood-vessels of one individual into those of another is a therapeutic measure of increasing clinical importance. The procedure is not without risk, but by careful selection of donors whose blood is homologous to, or compatible with, that of the recipients, the hazards are reduced to a minimum.

For centuries the results of transfusion were formidable. In 1900, Landsteiner and Shattock, working independently, discovered that blood had properties which caused agglutination of the corpuscles of individuals in the same species, and as a result, bloods were classified into groups. Further work by Moss in 1910 made it possible to classify blood into four groups as determined by their isoagglutinin and isohemolysin. (Figure 1.) This work has perhaps marked the greatest advance made in blood transfusion to insure the recipient against the disasters which are bound to occur frequently when blood is transfused without regard to blood compatibility. Brem modified the technic of Moss by determining the agglutination microscopically, so that at present the blood of donor and recipient may be classified within a few moments.

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Some workers are not interested in knowing the group of donor and recipient but prefer to match the blood by testing donor's corpuscles against recipient's serum and the recipient's corpuscles against the donor's serum before each transfusion. This is indeed a good procedure, but in emergencies it means unnecessary delay because one might, at a moment's notice, have satisfactory donors whose blood has already been grouped and found to be compatible with any of the four groups. Sanford has demonstrated graphically the Moss system of grouping (Figure 2). From this graphic chart one can readily see that the corpuscles of Group IV are not agglutinated by the serum of Group I, II or III. The corpuscles of Groups II and III are not agglutinated by the serum of Group I. The corpuscles of Group II are agglutinated by the serums of Group III and IV, and the corpuscles of Group III are agglutinated by the serums of Groups II and IV. Group I may receive blood from Group I, II, III or IV. Because the corpuscles of Group I are agglutinated by the serums of all other groups, this group can be used only in the transfusion of patients whose blood is in the same group. Blood of a donor which falls in a group homologous to that of a recipient is compatible from the standpoint of agglutination.

If agglutination and hemolysis of the corpuscles were the only considerations necessary before transfusion, one could adhere closely to the system of grouping devised by Moss and the procedure would be safe. Instances have been reported in which disease has been transmitted in the blood tissue, and it is therefore necessary to make use of all available laboratory tests to provide the recipient with unadulterated blood. Since about 10 to 18 per cent of the population have syphilis there is danger of transmitting this disease by blood transfusion.[27] With this knowledge, one certainly could not use blood from any donor without having the disease ruled out by a competent syphilologist and further by negative Wassermann reactions.

Giffin and Haines have shown that no permanent disability is incurred by the donors. Their study included a group of eighty-four professional donors who had made multiple donations, and their observations were: (1) multiple donations of 500 c.c. of blood when given at intervals of four or five weeks were not harmful; (2) women who have acted as donors often developed a definite anemia and recovered their cell volume and hemoglobin more slowly than men; (3) 27 per cent of the eighty-four donors felt definitely better after multiple donations than before, and in none of the others did the general health suffer; (4) 50 per cent had gained weight and only a few of the series had lost weight; nineteen had gained more than ten pounds, the average gain being twenty pounds; (5) a study of the blood volume in five donors more than three weeks after transfusion revealed no significant changes in plasma volume or cell volume, and (6) the blood-pressure in the seven patients with hypertension was not reduced following multiple donations.

Keynes says it is not at all uncommon for a strong young man to give 750 c.c. of blood and return at once to his work. Although it is rare for any single donation to exceed 500 c.c. at the Mayo Clinic, I have never seen any untoward effects other than a transient giddiness or fainting spell. Such a manifestation is usually exhibited by a donor who is more or less apprehensive, or by a new donor. Frequently transient manifestations are shown when a subject makes a donation in the early morning without having had breakfast.

A recent investigation of twenty-five donors who had made more than twenty-five donations each, has shown weakness and secondary anemia in only four cases. Five of the donors had given more than fifty, and one had given sixty-three transfusions. One of the twenty-five who re-

TABLE 1

Twenty-Five Donors Who Gave Twenty-Five or More Transfusions

Case	Age	Sex	Occupation	Transfusions	Hemoglobin Per Cent	Erythrocytes (Millions)	Leukocytes	Present Condition
1	44	M	Fireman	31	54	4.18	8900	Fair
2	55	M	Laborer	31	65	4.42	5700	Poor
3	24	M	Laborer	43	76	4.55	7200	Good
4	42	F	Housewife	25	70	4.52	8300	Good
5	25	F	Secretary	46	78	4.75	7200	Good
6	43	M	Carpenter	31	78	4.93	9300	Good
7	38	F	Housewife	46	77	4.28	9100	Good
8	51	F	Housework	57	71	4.34	5600	Good
9	42	M	Janitor	51	73	4.35	4900	Good
10	31	M	Carpenter	27	76	4.49	5600	Good
11	36	M	Mechanic	27	79	4.51	7600	Good
12	38	M	Nurse	35	77	4.09	8000	Good
13	36	F	Housewife	34	79	4.32	7600	Good
14	30	F	Housewife	33	72	4.42	9400	Good
15	41	M	Salesman	39	82	...	8600	Good
16	55	F	Housewife	42	77	4.46	....	Good
17	36	M	Carpenter	31	78	4.60	7600	Good
18	37	F	Housewife	27	75	4.76	5800	Weak
19	57	M	Laborer	25	72	4.21	7000	T.B.
20	51	M	Janitor	53	74	4.45	6100	Good
21	50	F	Housewife	31	70	4.27	5400	Good
22	41	M	Janitor	25	75	4.45	7100	Good
23	45	F	Housewife	36	75	4.98	7700	Good
24	46	M	Carpenter	40	78	4.98	....	Good
25	33	F	Housewife	26	50	4.10	6900	Fair

turned recently to be reexamined with regard to the advisability of giving more donations was found to have active pulmonary tuberculosis. One was weak, two had moderate secondary anemia, and the remainder had normal blood and their general health was excellent (Table 1).

Occasionally relatives wish to give blood and, when their blood is compatible and their general health satisfactory there is no objection to this. However, relationship does not relieve one of the responsibility of carefully testing the blood for compatibility as well as for transmissible disease.

Frequently in hemorrhage of the new-born, transfusion acts almost as a specific in controlling the bleeding, and therefore it is desirable. The findings of Cherry and Langrock would lead one to believe that a mother's blood is compatible with that of her babe, but their conclusions were based on their findings in thirty-four cases. These findings do not agree with those of many other workers (Sanford, Ottenberg). At the Mayo Clinic, the bloods of the mother and child (not new-born) have frequently been found to be incompatible. The question might well be asked: Does the grouping of a child's blood change as it advances in years? Sanford and Ottenberg have answered this question in the negative.

Young, robust, healthy subjects are desired for donors, although in many instances the blood from donors of late, middle life has appeared to have all the stimulating qualities of the blood from more youthful donors.

Indications for Transfusion

The indications for transfusion, although not universally uniform, are comparatively constant and they are increasing with accumulating experience. The comparative ease and safety with which a transfusion may be carried out justifies the procedure for patients who a few years ago would have been left to fate.

As early as 1872, Leisrink said, "Transfusion is indicated in all those pathologic conditions in which the blood is so altered in quantity and quality that it is unfit to fulfill its physiologic duties", and at the present time it would be most difficult to improve on this statement.

At the clinic transfusions are indicated in cases of: (1) acute anemia; (2) primary and secondary anemia; (3) hemorrhagic diseases: purpura, hemophilia, and hemorrhagic disease of the new-born, (4) sepsis, (5) general debility and malnutrition, and (6) in the preoperative management of the few cases of jaundice not controlled by other measures.

Cases of acute anemia, with or without frank hemorrhage, shock, or a combination of the two from any cause, as bleeding gastric or duodenal ulcers, ruptured ectopic pregnancy, or ruptured viscera; traumatic cases with severe hemorrhage, post-operative hemorrhage, and cases in which a large amount of blood has been lost in a short period of time; demand early transfusion if life is to be saved. The transfused blood replaces a part of the blood volume and increases the oxygenation of the vital tissues which tend to become asphyxiated by the sudden loss of blood. It also may tide over an individual long enough to permit control of the bleeding parts. In such cases as acute hemorrhage, it is universally agreed that transfusion is the best therapeutic measure.

Physiologic sodium chlorid solution has been used in many cases of frank hemorrhage and its value cannot be overestimated. It can be used and has been known to furnish a depleted circulatory system with enough circulating medium to maintain life until blood could be obtained. However, it lacks those vital qualities that are necessary to sustain life for longer than a few hours.

Ashby has shown that transfused corpuscles are present and are normal in appearance for thirty days; for this reason blood is preferable to physiologic sodium chlorid solution for replacing blood lost by hemorrhage.

Transfusion in chronic cases of anemia is to be encouraged, especially in cases in which surgical intervention is required. It is admitted that following transfusion the patient's strength, general well-being and ability to resist infection are increased and a grave surgical procedure may be transformed into a comparatively safe one. In other types of bleeding that might cause secondary anemia, as in ulcerative colitis, and gingivitis, the oozing of blood may be completely controlled by means of transfusion. This may be due to the increased strength and improved general health which follows the administration of blood, or to the tendency of transfused blood to control oozing by decreasing the coagulation time.

Diseases of the blood offer a much wider field and opinions vary as regards the worth of blood transfusion, as in pernicious anemia, for instance. Giffin, Ottenberg and Libman, Jones, Unger, and Weil and many others agree that transfusion is indicated in this distressing malady, not with the idea of providing a cure, but because as Unger has stated, the results of transfusion in cases of pernicious anemia are better than with any other form of treatment. Transfusions tend to stimulate remission. This has been found to be true in the management of cases of pernicious anemia at the Mayo Clinic and the best results

seem to be obtained by a series of transfusions. Jones suggests that a series of ten transfusions should be made to bring the blood within satisfactory limits and believes that the blood may be held at such a level by an occasional subcutaneous injection of 20 c.c. of blood. Ottenberg and Libman are not so enthusiastic about the results in cases of pernicious anemia. They believe that certain types that tend toward frequent remission may be benefited but if the disease is virulent and rapidly progressive, the end-results hardly justify the procedure. They maintain that if transfusion is to be done, the best results may be expected if transfusion is performed early in the disease, inasmuch as the prolonged anemia is prone to be followed by disturbed function or actual degeneration of viscera and central nervous system.

Soresi believes that transfusion is contraindicated in cases of pernicious anemia and he is not alone in this view. Bowcock believes the procedure becomes self-limited and that finally no suitable donor can be obtained. While these men may be right in their deductions, it seems unjust to refuse to transfuse blood in cases as a group when the end-results have been beneficial in approximately 60 per cent of the cases treated.[13, 27]

Skinner and Lindeman have shown that hemophilia is greatly benefited by blood transfusion not alone because of the replacement of blood but because some deficient quality of the blood is replaced, and acts temporarily to lessen the prolonged coagulation time.

In cases of splenic anemia, purpura and many of the other blood diseases, temporary or permanent benefit may result from blood transfusion.

Bell has transfused blood in cases of eclampsia and believes that the procedure deserves much more consideration. He reported one case in which convulsions ceased after 500 c.c. of blood had been given. The patient talked coherently and felt well sixteen hours after receiving the blood. There was a marked drop in the blood urea; renal function improved and the albumin in the urine decreased.

Blood transfusion has also been recommended by Burmeister in cases of coal gas poisoning. In his experimental work, he found that in 75 per cent of cases in which the heart action could still be elicited, the procedure of venesection followed by immediate transfusion proved successful. His theory is that the power of the corpuscles to carry oxygen was destroyed because of a stronger affinity for carbon-monoxid gas than for oxygen. By permitting the carbon monoxid fixed corpuscles to leave the circulatory system and replacing them by new corpuscles free from carbon monoxid, the oxygenation of the vital parts was made possible. He recomends the procedure for all patients with carbon monoxid poisoning when they are seen early, before the heart action has ceased.

During the year 1924, 990 blood transfusions were performed at the Mayo Clinic. The majority of these were done by the sodium citrate method, as advocated by Lewisohn. In approximately one case out of every ten the Unger method of transfusion was used. Three cases were done by the syringe-cannula method of Lindeman. The indirect method with sodium citrate and the Unger method with unmodified blood have proved very satisfactory, and at the present time these are used entirely. Other methods have been advocated by Carrell, Crile and others and the methods have proved their worth. However, their wide use has been limited because of the training and surgical ability necessary to perform the transfusion successfully by these methods (Table 2).

The dangers of transfusions lie largely in the usage of incompatible blood, the transmission of disease and such accidents as acute cardiac dilatation or air emboli. These are extremely rare since the laboratory tests have enabled us to detect incompatibility of the blood and in the majority of cases of transmissible disease. Acute cardiac dilatation may be guarded against by permitting the donor's blood to enter the recipient's vessels very slowly. Air emboli, although they are extremely uncommon, may be eliminated entirely by careful technic.

The technic used at the Mayo Clinic has been practically unchanged during the last nine years except in a few minor details which consist in preparing the rubber tubing and utensils according to the method advocated by Busman. This method has been modified slightly. New rubber tubing is first soaked twenty-four hours in a 5 per cent solution of sodium hydroxid. A stream of flowing water is then passed through the tubing constantly for from seven to ten days. Daily the tubing is rolled between thumb and fingers to loosen any soluble portions of toxic material which may be on the inner surface. The tubing is then boiled in water thirty minutes and is ready for use. The Lewisohn needles prepared in carbolic acid solution are used. The glass utensils are boiled in triple distilled water for ten minutes. The sodium citrate used is prepared by Lilly and Company and obtained in sealed ampules which contain 18 grains of the drug, chemically pure. The contents of one ampule is added to 60 c.c. of a 0.6 per cent sterile sodium chlorid solution which makes approximately a 2 per cent solution;

this is sufficient to prevent coagulation of blood in amounts of 500 to 600 c.c. The donor's arm is prepared as for any surgical operation and draped with sterile towels. A tourniquet is lightly put in place above the elbow to accentuate the superficial veins of the antecubital fossa and forearm. Any of the veins sufficiently large may be used. Formerly fixation of the vein to the skin by means of a fine cambric needle was preferred, but a vein may be satisfactorily fixed by tension and pressure. The needle is then inserted into the lumen of the vein from a distal position towards the tourniquet. The needle is inserted in this direction as it is less likely to pass completely through the vein and also because there is less chance of injury to the intima which causes an unsatisfactory flow of blood from the donor. The usual amount of 500 c.c. is readily obtained and immediately transferred to the recipient whose arm has been prepared in exactly the same manner as that of the donor. After the needle is inserted into the vein, the flow of blood begins immediately on the release of the tourniquet and is continued by means of gravity for approximately fifteen minutes, although it may be permitted to enter the recipient's circulation in much less time without ill effects. In some instances, it takes from forty to fifty minutes for the transfusion of 500 c.c.

TABLE 2

Six Hundred Five Consecutive Transfusions, (Kahler Hospital, 1924)

DISEASE	Patients	Transfusions	Reactions*	Fever	Chills	Chilly	Nausea and Vomiting	Dizziness and Headache	Hemoglobinuria	Citrate Method	Citrate Method; Reactions	Unger Method	Unger Method; Reactions	Blood kept in Ice-box	Ice-box Blood; Reactions	Homologous Groups	Homologous Groups; Reactions	Heterologous Groups	Heterologous Groups; Reactions	Group not Stated
Pernicious anemia	139	458	94	87	42	16	21	11	2	431	91	27	2	4	3	436	91	22	3	0
Secondary anemia	52	79	9	5	5	1	1	4	0	76	10	3	0	0	0	72	9	5	0	2
Splenic anemia	3	13	2	2	0	0	0	0	0	13	2	0	0	0	0	8	2	5	0	0
Leukemia	8	21	2	1	0	0	1	0	0	19	2	2	0	0	0	21	2	0	0	0
Hemorrhagic purpura	3	7	2	2	2	0	0	0	0	6	2	1	0	0	0	7	2	0	0	0
Bacterial endocarditis	4	9	1	0	0	1	0	0	0	5	0	4	1	0	0	9	0	0	0	0
Hemolytic jaundice	2	11	0	0	0	0	0	0	0	2	0	9	0	0	0	11	0	0	0	0
Obstructive jaundice	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1
Hemorrhage	5	5	0	0	0	0	0	0	0	5	0	0	0	0	0	4	0	0	0	0
Hemophilia	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
Total	218	605	110	97	49	18	23	15	2	559	107	46	3	4	3	570	107	32	3	3
		(18.18%)		(8.1%)						(19.14%)		(6.52%)				(18.77%)		(9.37%)		

*An increase in temperature of 1.5° considered a reaction.

When the Unger instrument is used, the method of sterilization of instrument and tubing is the same as for the sodium citrate method except that the inside of the aspirating syringes and the valves are prepared by applying sterile vaselin. Donor and recipient are placed side by side and the arms draped. A needle is first placed in the recipient's vein, the tourniquet released and normal sodium chlorid solution introduced into the recipient's vein. This prevents coagulation while a second needle is being inserted into the donor's vein. The aspirating syringe is then attached to the valve and a syringe is drawn full of blood from the donor. At this point the valve is turned and as blood is being injected into the recipient's veins a flow of the sodium chlorid solution is automatically directed into the vein of the donor to prevent coagulation of the donor's blood while the first syringe full of blood is being introduced into the recipient's vein. This procedure is repeated until the desired amount of blood has been transferred from donor to recipient. The despatch with which the foregoing methods may be carried out makes either desirable.

Occasionally during transfusion or shortly thereafter, there are manifestations in the recipient which may or may not be alarming. These are known as reactions and may be pictured in all grades of severity, varying from a sensation of discomfort to convulsions hemoglobinuria, coma or death. The more severe reactions occur as a result of incompatibility of the blood of donor and recipient. The milder reactions which vary in severity, are tingling of the extremities, numbness, dyspnea, precordial pain, dizziness, head-

ache, nausea, vomiting, chills, fever, and so forth. These may also be early manifestations of incompatibility, and the transfusion should be terminated. Reactions cannot be attributed to any one factor; they are more probably the result of many factors. Hunt, by comparing the frequency of reactions in patients with pernicious anemia after they had received two or more transfusions, demonstrated that reactions are more prone to appear in persons whose general condition prior to transfusion was poor. The reactions were fewer after the patients had received several transfusions and their general condition had improved.

Special preparation of the sodium citrate has decreased the frequency of reactions which were formerly attributed to impurity of the sodium citrate solution. That sodium citrate is a toxic foreign agent and in itself responsible for many of the reactions has been proposed,[10, 17, 20, 31] but in dilutions that are necessary for the prevention of coagulation, toxicity has been disproved.[14, 19] It is probable that there are other causes of reactions, such as foreign protein sensitization. The percentage of reactions varies within wide limits with the various methods and workers. No definite standard has been accepted by men doing transfusions to designate what shall or shall not be considered a reaction. Until the methods, reactions and results can be standardized, the study of comparative results is worthless.

Conclusions

1. The use of carefully selected donors reduces the hazards of transfusion.
2. The same donors may be used repeatedly without ill effects to themselves.
3. The indications for transfusion are becoming more numerous.
4. The transfusion of blood is not free from danger.
5. Small amounts of sodium citrate are not toxic.
6. Because of its simplicity, safety and satisfactory results, the indirect method with sodium citrate is preferred.

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GIFTS TO JEFFERSON HOSPITAL

The will of the late Simon Gratz of Philadelphia provides for Jefferson Hospital: $50,000 for a private room for the care of school teachers, free of charge; $7,000 to be awarded to a graduate doing within five years the most important work in the advance of medical or surgical treatment of disease or research; $20,000 for the endowment of four beds in memory of members of his family.

POST-OPERATIVE MASSIVE COLLAPSE OF THE LUNG; A CASE REPORT*

J. C. SHELLITO, B.S., M.D., Independence

Post-operative massive collapse of the lung is defined[1] as "a febrile complication arising within a few days of operation, the characteristic and unique feature of which is the combination of the signs of a unilateral pulmonary consolidation with displacement of the heart to the affected side".

The term was first used by W. Pasteur[2] in reference to material obtained at necropsy. He found areas of lobar collapse occurring with post-diphtheritic neuritis. Later he clearly and fully described the clinical picture of the same condition occurring as a post-operative complication.

Since then many cases have been reported following a variety of abdominal operations. Bradford[3] reports cases following wounds of the buttocks and thighs, cases following penetrating and non-penetrating wounds of the chest and a contralateral type with unilateral hemothorax.

To explain this phenomenon seems difficult. Pasteur spoke of active collapse of the lung meaning that the air was forced out of the involved area. This he thought might be accomplished by a reflex effect on the diaphragm and accessory muscles of respiration. But the nature of the expelling force was not clear. Elliott and Dingley[4] considered the collapse to be due to inflammatory obstruction of the bronchioles as suggested by the temperature and by the mucopurulent sputum always present. The absorption of alveolar air following obstruction of a bronchus had been proved experimentally by Lichtheim. Clinically this is shown by a case recently reported by Manges.[5] A bean, lodged in a main bronchus and completely obstructing it for only one day produced atelectasis of that lobe with extreme displacement of the heart and mediastinum to the affected side and with the diaphragm in high position. The roentgen appearance seems identical with that seen in massive collapse after operation. In this case the atelectasis cleared within a few hours after the removal of the bean, the heart returning to its proper position. Similarly a number of instances are on record where post-operative massive collapse has as suddenly vanished.

The signs and symptoms vary from latent to severe. They appear typically in the following case.

An athletic school girl of twelve years was admitted at 6:30 p. m., June 23, 1925, with the diagnosis of acute appendicitis. Operation at 9:00 p. m. revealed a gangrenous appendix. The anesthetic was ether and the recovery good. On the morning of June 25, about thirty-six hours after the operation she began to complain of pain in her chest, her pulse began to increase in rate and her temperature to rise. (Figure 1.) Cyanosis

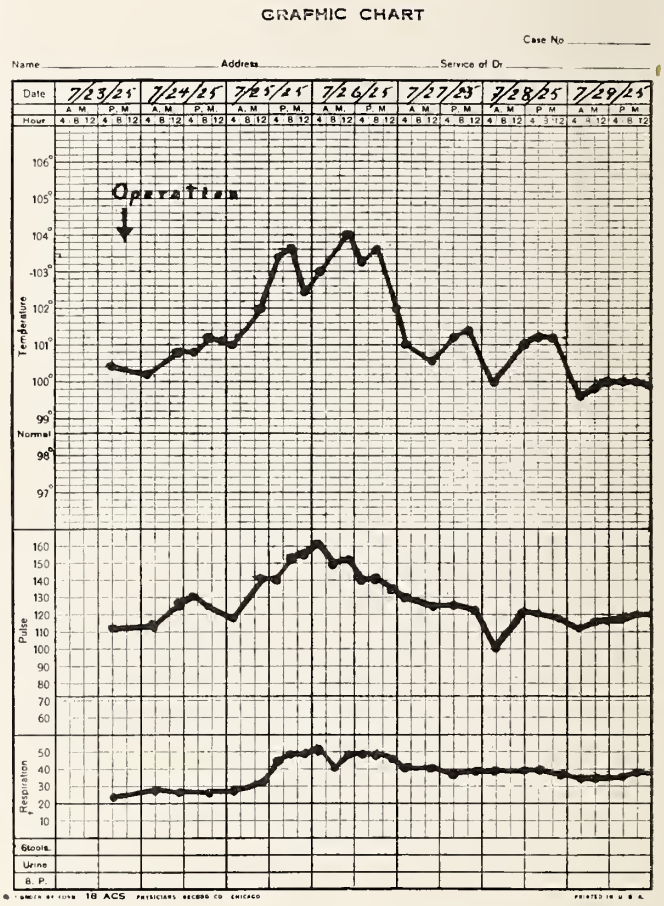

FIGURE 1. Chart showing pulse, temperature and respiratory variations at onset of post-operative massive collapse of the lung.

and dyspnea were alarming. The patient lay twisted to the right. Inspection of the chest after squaring her up in bed showed relative immobility of the right side and narrowing of the interspaces. There was compensatory increase of the movements of the left chest. The cardiac impulse was seen in the second interspace to the right of the sternum. The left margin of cardiac dullness was at the left sternal margin. The right margin of cardiac dullness was lost in the dullness of the right lower chest and axilla. This dullness shaded off into impaired resonance below the right clavicle. Breath sounds over the right lower chest were greatly diminished and broncho-vesicular in character. The condition of the patient did not warrant turning her for examination. The tentative diagnosis being massive collapse, a cassette was slipped beneath the patient and a roentgenogram taken. (Figure 2.)

*Read before the June meeting of Buchanan County Medical Society at Independence, 1925.

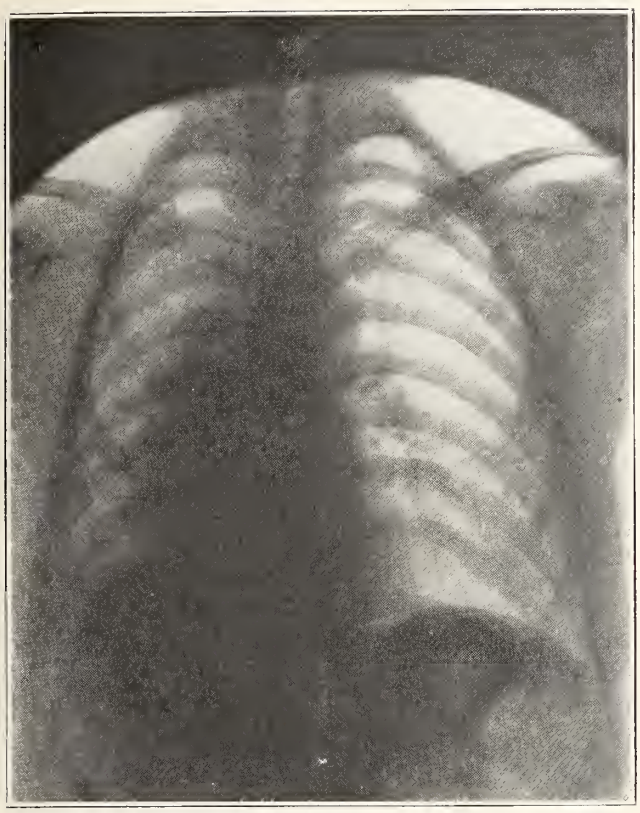

Figure 2. Roentgenogram made 36 hours after operation. Tube anterior. Right chest diminished in size as compared with left. Right inter-costal spaces narrowed. Heart mediastinum and trachea displaced to right. Right diaphragm high. Right lower lobe increased in density. Left lung decreased in density due to compensatory emphysema.

This showed diminution in area of the right chest, increase in density of the right lower lobe, displacement of the heart, trachea, and mediastinum to the right, and a high diaphragm. The diagnosis was therefore confirmed.

On June 26 the pulse, temperature and respiratory rate reached their highest points. Cyanosis was deep, respiration labored and movements of the right lower chest almost imperceptible. The left chest was hyperresonant throughout. Cough had appeared. The sputum was scanty, mucopurulent and for two days blood-tinged. The cardiac impulse was prominent in the second and third right interspaces. The breath sounds were tubular over the right upper down to the anterior axillary line where they became distant and broncho-vesicular.

On the 27th the cyanosis was diminished. The movement of the right chest was increased.

On the 28th she was much improved. The cardiac impulse now appeared in the fourth left interspace though there was still pulsation in the second and third interspaces to the right. Dullness below the fourth rib in front on the right and below the angle of the scapula was present. Breath sounds over the areas of dullness were distant broncho-vesicular in front and loudly tubular behind. Turning the patient produced coughing and such severe cyanosis that examination had to be discontinued.

The patient steadily improved until on July 8 she was allowed to go home. There was then diminished excursion of the right lung, impairment of the percussion note at the right base and displacement of the heart to the right. The abdominal wound was well healed.

She walked into the office July 15 saying that she felt almost well. The right chest then showed distinctly less excursion than the left. For the first time we were able to observe that the right costal margin flared further on inspiration than the left. Fluoroscopic examination in the erect position showed heart and mediastinum still drawn to the right. The right diaphragm was high, its curve flattened on top, its excursion diminished and there were adhesions in the right costo-phrenic angle. There was no evidence of fluid. A chest film was taken for comparison with those made while in hospital, but in the usual position. (Figure 3.)

Comment

A case of post-operative massive collapse of the lung is reported showing clinical and roentgenological evidence of an inflammatory process at the affected base. The roentgen appearance is

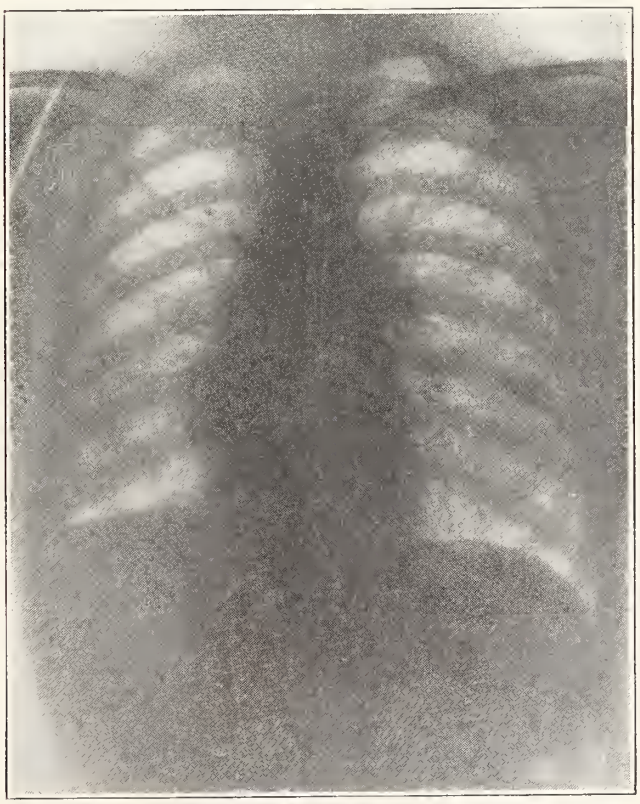

Figure 3. Roentgenogram made 15 days after operation. Tube posterior. Heart and mediastinum still displaced to right. Right diaphragm flattened. Pleural adhesions in right costo-phrenic angle.

the same as that produced by obstruction of a main bronchus. It seems logical to assume that the collapse is produced by obstruction of the smaller air passages directly from the local inflammation.

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TULARAEMIA IN IOWA

W. R. WHITEIS, M.S., M.D.
AND
E. J. ANTHONY, M.D., Iowa City

We are informed by the U. S. Public Health Service Laboratory, Washington, D. C., that the following described cases of tularaemia are the first to be reported from Iowa.

On November 16, 1925, at 4:00 p. m. D. B., a fifteen year old boy was sent to the hospital by Dr. Miller of North English, Iowa, with a diagnosis of septicæmia. The boy had been ill for ten days. In the last twenty-four hours, he developed very pronounced abdominal pains with nausea, vomiting and marked tenderness. It was feared that he might have appendicitis as a complication. He complained of headache, loss of appetite, nausea and vomiting. Pain, soreness, stiffness of arms, legs and back, tenderness in right axilla and both groins.

The patient was well nourished and developed. His apparent age fifteen. He had an anxious expression and appearance of great prostration. Skin dry, and patient looked anemic. Eyes were glazed, tongue dry, and breath fetid. The patient would lie on his back in bed with his thighs flexed. The abdomen was distended. On the inner side of the first phalanx of the little finger of his right hand, he had an ulcerated area one-half cm. in diameter; redness about it and some slough.

Sight, hearing and mind were unaffected. Chest, heart and lungs negative. The abdomen was tender and tympanitic; tenderness was slightly more pronounced over McBurney's point. The areas of greatest tenderness were on either side of the spinal column, extending from the pelvis well above the umbilicus. On deep palpation over lumbar nodes, he flinched and complained of pain. The lymph nodes were enlarged in both right and left axillæ, one in the right axilla was the size of an English walnut, and hard, tense and very painful on palpation. No redness of skin over the nodules. The lymphatics in both groins were enlarged and tender, more pronounced in left groin in contrast with the greater tenderness in right axilla. The cervical lymph nodes on both right and left sides were enlarged and tender. Because of the presence of enlarged lymphatic glands in the axillæ, groins and cervical regions, and because the most marked abdominal tenderness was over the lumbar lymph nodes, the probability of appendicitis was thrown out. The abdominal tenderness was thought to be due to infection of the lymph glands and a diagnosis of an acute lymphatic infection was made.

When the complete history was taken, it was learned that the boy was in the habit of shooting rabbits several times a week and dressing them, and his mother prepared them for the table. At this time a diagnosis of tularaemia was made. His temperature was 102.8, pulse 102, respiration 26. The urine was negative. Leucocytosis of 18,000. At 7:00 p. m. his temperature had risen to 103.2, pulse 108, respiration 32. He was given 6½ c.c. of a 2 per cent mercurochrome, intravenously, and a moist dressing applied to the finger. At 7:55 p. m. he had a chill and emesis. At 8:20 his temperature was 104.6, pulse 120, respiration 36. At 9:30 the patient had persistent vomiting and was restless. He was given one-half grain opium suppository. At 10:15 p. m. temperature was 102.4, pulse 120, respiration 20. After 12:15 a. m. patient slept five and one-half hours. At 3:00 a. m., the temperature was 97.8, pulse 78, respiration 24. At 6:30 a. m., the temperature was 98, pulse 84, respiration 22. The remaining five days that he was in the hospital his temperature ranged from 97.2 to 99.6 and the last two days it was never above normal. White cell count on the 17th was 15,150 and on the 22nd 11,200.

The first morning after mercurochrome was given, he had a breakfast of cereals, toast, poached egg and coffee and experienced no discomfort. On the third day he was put on general diet, and the anxious, listless patient of three days before, spent several hours each day reading a paper. Within forty-eight hours of the time the mercurochrome was given, the tenderness had left the lymph nodes and the glands in groins and axillæ diminished one-half in size. On the eighth day, he was discharged from the hospital. The lesion on the finger had diminished in size and drainage had almost completely subsided.

In order to get a laboratory confirmation of the diagnosis, it was necessary to send the material to the U. S. Public Health Service Laboratory, Washington, D. C. On November 23d, blood serum mixed with equal parts of neutral glycerin was sent to Dr. Edward Francis of the government laboratory and on November 29th the following telegram was received:

Washington, D. C., November 29, 1925.
Dr. W. R. Whiteis,
Dubuque Street, Iowa City, Iowa.
Both serums positive, tularaemia. Boy very strong positive. Letter follows.
Edward Francis.

The second case to come under our observation was the mother of the above described case, Mrs. C. B. Four weeks ago she cut her index finger of the right hand. One week later, the finger was red, swollen, painful and discharging. She developed a temperature and complained of headache, nausea, weakness, tenderness, stiffness of muscles and tenderness in neck, axillæ and groins. The left leg was lame, tender, but not swollen. This condition lasted for twelve days. Symptoms gradually subsided, but the patient still compained of being weak and tired. She was admitted to Mercy Hospital at Iowa City, Iowa, on November 21, 1925, at 3:30 p. m. She was able to walk into the house. Temperature 99.4, pulse 68, respiration 20; white count 14,300; reds 4,450,000; hemoglobin 60 per cent; differential count—cells 100. Polymorphonuclear neutrophyles 71, lymphocytes 22, large mononuclear 2 per cent, neutrophilic myelocytes 4 per cent, nasophilic myelocytes 1 per cent. Urine negative.

The patient was a slight, wiry woman of about forty-five years. Mother of six children. She looked sick and anemic. On the neck, chest and over the body were numerous purplish spots. These lesions were circular and from ½ to 1 mm. in diameter and slightly elevated. Apparently there was no break in the continuity of the epithelium over these lesions, with the exception of two small and one large spot on the neck. The lesion on the index finger is still sore and there is still drainage. Examination of head negative. Lymph glands of the left side of neck, right axilla and both groins were enlarged and tender. Chest, heart, lungs and abdomen negative.

At 5:00 p. m. on the day of her admittance, she was given 10 c.c. of a 2 per cent solution of mercurochrome, intravenously. At 6:00 p. m. she felt slightly chilly and external heat was applied. At 6:30 p. m. there was nausea and vomiting. At 7:00 p. m. temperature was 103, pulse 96, respiration 24, and there was slight emesis. Temperature, pulse and respiration gradually increased and at 9:00 p. m. temperature was 104.2, pulse 120, respiration 28, and the patient was perspiring freely. At 11:00 p. m. patient felt more comfortable and at 11:45 was sleeping. There was a gradual subsidence hourly of temperature, pulse and respiration. At 6:00 a. m. the next morning, temperature was 98.6, pulse 66, respiration 18. The patient had slept five hours and awoke refreshed, and said she felt better than she had in a month. She was given soft diet, the finger was dressed with hot boric solution. There was slight drainage.

On November 23d, lymph nodes and skin lesions had materially diminished in size and the tenderness had almost disappeared. At 2:30 the patient was dismissed from the hospital.

VOMITING OF PREGNANCY

As every general practitioner knows, vomiting of pregnancy has ever been one of the most troublesome maladies with which he has to deal.

Glucose therapy, various digestives and many other therapeutic measures employed with questionable results and on doubtful theories.

Endocrine unbalance because of suspended menstruation has been discussed and with feasible reasoning. This with the nervous reflex is probably as near the truth as any of the theories.

Sometimes all that is required is to tampon a retroverted womb. Some five years ago it occurred to me that Tr. of crataegus should be helpful in these cases and during that time I have applied that drug successfully in all the cases coming under my care and in consultation. The whole field of usefulness of crataegus is functional and so I reasoned out its use in emesis gravidorum.

I put the patient to bed and clear the bowel well with enemata at frequent intervals and feed her only dried toast and as much water as she can take. On waking from sleep in the morning she takes from twelve to fifteen drops of imported Tr. of crataegus from a dropper very slowly on the tongue without water. The crataegus is repeated in this manner every four to six hours and it is a very stubborn case that doesn't get results beginning at once and nearly all cases will be wholly relieved within the week. Occasionally she may be obliged to take the remedy for a day at intervals until the middle of the term.

Rest in bed, enemata, to clear the bowel and excite downward peristalsis, and crataegus will be found to afford the desired relief in nearly all cases. Rest in bed will not be found necessary after about two days. Sometimes a little procaine in the crataegus will be helpful.

—A. E. Conrad, M.D., Decorah, Iowa.

The Journal of the Iowa State Medical Society

DAVID S. FAIRCHILD, Editor.....Clinton, Iowa

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Vol. XVI April, 1926 No. 4

MEDICO-LEGAL PROTECTION

Dear Doctor:

The board of trustees are anxious to obtain an expression from the membership with regard to the medico-legal protection now being furnished by the State Society and have instructed me to write and ask you to reply to the questions listed below.

Please answer the questions frankly and fully at your earliest convenience and return this questionnaire with your answers. An early reply will be appreciated.

1. Is the medico-legal protection, as now provided by the State Society, satisfactory to you?
2. Do you carry medical protective insurance other than that provided by the State Society?
3. What changes, if any, would you suggest be made in the present plan, which has been in operation for nineteen years?

TOM B. THROCKMORTON, Sec'y.

Clinton, Iowa, March 10, 1926.

Board of Trustees of
Iowa State Medical Society,
Gentlemen:

We have from time to time made some changes in operation of medical defense when some other method would seem to serve a better purpose, but the general policy has been continued from the beginning to the present. I have asked Mr. Throckmorton to secure for you a copy of the Bulletin of the American Medical Association, which contains a digest of the methods of medical defense employed by the various states. I am not able to supply you with the literature on this subject, for the reason that our reports and public statements in relation to medical defense are scattered through the Journal of the State Society for the last fifteen years and more; the last one was issued in July, 1925. Besides this we have several volumes of confidential letters from men who have furnished information to us.

Regarding the value of the method employed by the defendant in treatment of the case, our lawyers only interpret the legal facts, the committee on medical defense gather the data and arrange it for the use of our attorney, which, of course, would be a great material saving of lawyer's fees.

At the Sioux City meeting of the State Society 75 per cent of the societies voted in favor of making the assessment for the medical defense obligatory to every member. The question of medical defense was submitted to the county societies in referendum.

The work of the committee has been made public in as far as public policy would permit and those who have read the Journal for the last fifteen years are familiar with our work. I am so taken by surprise by this inquiry, that I am only able to answer certain questions dogmatically, that I am in favor of our present attitude of medical defense and if the board of trustees will look over the files of the Journal for February and March, 1926, "Medical Defense", they will discover the generous attitude of the Nebraska and Texas state societies.

Yours very truly,
D. S. FAIRCHILD.

Iowa City, Iowa, February 24, 1926.

D. S. Fairchild, M.D.,
Clinton, Iowa.
Dear Doctor:

In response to your request for an opinion as to the position that Dr. L. has placed himself in, and what he had better do, I beg to submit the following:

As I understand the facts, Dr. L. is a physician and surgeon, who has registered and paid the tax provided in the Harrison Drug Act of December 17, 1924, as amended by Sections 1006 and 1007 of the Revenue Act of 1918. That after he had complied with the law and was authorized to dispense opium, or cocoa leaves, their salts, derivatives or preparations thereof, upon application to him of a stranger who advised him that his child was sick, he dispensed to this stranger the prohibitive drugs. I also understand that the

stranger told the doctor that he had been discharged from Rochester as incurable, and asked for morphine, which was refused.

The question is whether under the circumstances, this doctor violated the Harrison Drug Act by furnishing morphine to the applicant to be administered to the applicant's sick child.

It is unlawful for any person to sell barter, exchange or give away any of the aforesaid drugs, except under certain conditions, but these conditions do not apply "to the dispensing or distribution of any of the aforesaid drugs to a patient by a physician * * * registered under this act in the course of his professional practice only".

Even where the prohibitive drug is dispensed in the course of professional practice only, certain records must be made and kept. These records I assume that Dr. L. did keep and the only question is whether or not the dispensing of the prohibitive drug to a third person for the benefit of a patient whom the physician has not seen or examined, is dispensing of the drug "in the course of his professional practice only".

The courts have held in construing this act that the physician must act in good faith in the course of his professional practice. This is nearly always a question of fact for the jury to decide, and expert evidence would be admissible from the lips of members of the profession as to what would be proper practice under the circumstances. It would seem to me, however, even though the statute is a revenue act and not one designed for the regulation of the practice of medicine, that a physician who prescribes for an absent patient whom he has not seen, is taking chances, unless he has reason to have full confidence in the person who makes the application for the medicine and to whom it is delivered.

Dr. L. learned that the applicant was an incurable addict and this should have put him on his guard, and in my opinion this circumstance would go a long way in convincing the jury that the doctor had not acted in good faith. The law does not purport to regulate the practice of medicine, and so long as the doctor in good faith dispenses the prohibitive drugs in the actual practice of his profession he is protected, but in determining whether he is acting in good faith, both the court and the jury will take into consideration what everybody knows, to-wit: that persons who are addicted to the drug habit are notoriously unreliable and will resort to dishonest methods of obtaining the drug. It seems to me the only safe way for a physician authorized to dispense, is to either make a personal investigation of the patient or be in the possession of reliable information as to an existing emergency, which reasonably excludes the necessity for such personal examination, bearing in mind that the conduct of the physician may have to pass under the scrutiny of a jury, who has a wide latitude in determining the question of the physician's good faith.

The physician can only prescribe and dispense for legitimate medical purposes, and it is primarily the duty of the physician to determine what constitutes legitimate medical purposes, but his determination of the question is not final, and a jury may reach a different conclusion, depending upon the testimony under the circumstances. This puts the physician in such a position that he should exercise the highest care and the best of faith, and I doubt very much whether the dispensing of the drug under the circumstances assumed, Dr. L. can be said to have exercised the requisite good faith.

Yours very truly,
Chas. M. Dutcher.

NARCOTIC LAWS AND PHYSICIANS

National and state narcotic laws are being enforced with such superlative stupidity that the honest practice of honest scientific medicine by honest, adequately educated physicians is being increasingly more hazardous.

Medical opinion is practically unanimous in this conclusion, and what is more important, doctors everywhere are becoming restive under the autocratic rules of tax collectors as to what a doctor may do for his patients. The intelligent element of the voting public is securing some effective but tardy "education", which may in the course of time produce effective results.

Since the decision of the supreme court that our chief narcotic law is—as the doctors always have claimed it to be—purely a revenue measure, sane people in all walks of life are waking up to the surprising fact that we are trying to regulate a health problem by money-getting laws administered by money getters for moneyed reasons. People at last are beginning to realize, as one prominent non-medical citizen recently said, that our government is making huge profits out of a vice.

Laws, rules and regulations are now so numerous that an honest, conscientious doctor often must choose between his duty to his patient and the possible consequences of the law. This to such an extent that many doctors refuse to take chances with tax collectors, under cover agents, and whatnot, by doing for sick people what scientific medicine endorses as the best treatment.

Few doctors can carry in their minds the numerous laws and painfully numerous bureaucratic regulations required of them every time they give or prescribe a dose of narcotic drugs.

One of the most illuminating analyses and digests we have seen of the federal narcotic laws has been recently published—with their endorsement—by the Los Angeles County Medical Association. Every doctor ought to have a copy of this 45-page booklet on his desk, and he ought to study it. In order to pay part of the expense of publication, a price of 25 cents is charged, and the book may be obtained from the Los Angeles County Medical Association, 736 South Flower street, Los Angeles.

—California and Western Medicine.

Iowa City, Iowa, February 8, 1926.

D. S. Fairchild, M.D.,
Clinton, Iowa.

Dear Doctor:

Answering your favor of January 28 asking for "the idea of the Medical Society as to the legality and propriety of a chiropractor or an osteopath signing an application blank for the admission of a patient to The State Sanatorium":

I cannot, of course, say what the idea of the Medical Society is, but I interpret the correspondence to be a request from me for an opinion as to whether, under the law, a chiropractor or osteopath is competent to sign an application blank for the admission of a patient to the Oakdale Sanatorium. Answering this question, I beg to submit the following: Section 3390, of the Code of 1924, is as follows:

"An application for admission to the sanatorium shall first secure a thorough examination of his condition by a physician licensed to practice medicine in this state, for the purpose of determining whether said applicant is afflicted with pulmonary tuberculosis. Said examining physician shall, as accurately as possible, fill out the blanks furnished for that purpose, and at once mail the same to the superintendent."

Section 3389 of the Code of 1924, paragraph 6, imposes upon the superintendent the duty to furnish to each applicant for admission proper blanks on which to make the application.

It would seem to me that the law contemplates that the patient himself should make the application, but that it shall be accompanied by the report of the examination of a "physician licensed to practice medicine in this state".

For some purposes the term "physician" means "a person licensed to practice medicine and surgery, osteopathy and surgery, osteopathy, or chiropractic". (See section 2181 of the Code of 1924). This section makes the above definition of a physician applicable to the provisions of Title VII of the Code, which title relates to the State Department of Health, the State Board of Health, The Local Board of Health, Contagious and Infectious Diseases, Disposal of Dead Bodies, for Scientific Purposes, Public Health Nurses, Maternity Hospitals and Registration of Vital Statistics.

Therefore, the definition of a physician given there is not necessarily applicable to Title VIII under which we find the provisions for the practice of medicine and surgery, the practice of podiatry, the practice of osteopathy and surgery, the practice of chiropractic, and the practice of nursing, dentistry, optometry, etc. In Title VIII, section 2439 of the Code, we find this provision:

"No person shall engage in the practice of medicine and surgery, podiatry, osteopathy, osteopathy and surgery, chiropractic, nursing, dentistry, dental hygiene, optometry, pharmacy, or embalming as defined in the following chapters of this title, unless he shall have obtained from the state department of health a license for that purpose."

Chapter 116 of Title VIII, sections 2538 and 2539, relates to the practice of medicine and surgery and expressly excludes osteopaths, osteopaths and surgeons, chiropractors, from the class of persons deemed to be engaged in the practice of medicine and surgery.

It, therefore, seems to be the policy of the law to make a distinction between physicians licensed to practice medicine and surgery and physicians licensed to practice osteopathy and surgery and physicians licensed to practice chiropractic. Each is required to take a different examination and to possess different qualifications, and each is prohibited from practicing in the healing art the method of any other class unless he also has license as a member of that class. I am of the opinion, therefore, that section 3390, governing the application of patients to the state sanatorium requires the examination to be made by a physician licensed to practice medicine, and that a physician or other person licensed to practice only osteopathy or osteopathy and surgery, or chiropractic, is not competent to make that examination, and I believe that under the law, the superintendent of the State Sanatorium has no authority to admit any patient to the Sanatorium except after an examination by a physician licensed to practice medicine, who shall certify that the patient is afflicted with pulmonary tuberculosis, and that a certification of such fact by an osteopath or a chiropractic, or any one else, except a physician licensed to practice medicine, is not a

compliance with the law and would not entitle the patient to admission to the Sanatorium.

Yours very truly,

(Signed) Chas. M. Dutcher.

CONDITION OF MEDICAL PRACTITIONERS IN BERLIN

Those who knew Germany before the war will read of the condition of medical practitioners in Berlin with deep sorrow and sympathy. We recall a banquet given by the faculty of the University of Berlin in 1913 and of meeting a large number of distinguished German surgeons at the International Congress early in 1914, just before the outbreak of the World War, together with surgeons of other countries, soon to be engaged in deadly strife, in a few weeks. And now, when the bitterness of war has passed, we feel acutely the sad changes that have come to men we admired.

It has become generally known how great has become the distress among medical men in Germany, during recent years. The medical profession is profoundly grateful to those American physicians who labored to relieve this distress. Professor Einhorn of New York, and professors Hektoen and Petersen of Chicago, were leaders of the movement to raise funds in the United States. During 1923, which marked the climax of the period of inflated currency, the funds for physicians were supplied almost exclusively through the endeavors of the aforementioned physicians. It thus became possible to supply needy physicians and their dependents with a measure of assistance. The Aushilsfonds der Notgemeinschaft deutscher Aerzte, which wac established by Professor Schwalbe, served as mediator between the American committees and the German aid societies.

The deplorable conditions of recent years have been much improved. With the stabilization of German money, the incomes of German physicians have increased, and they are now gradually becoming able to keep above water the heads of their dependent colleagues. The sufferers today consist, for the most part, of physicians who are getting too old to practice. The representative medical societies are supplying a reasonable quantity of food for these elderly physicians. Recently, the Aerztekammer (chamber of physicians) of Berlin has been more active in this direction. In Berlin aid is most needed. A few weeks ago, at a meeting of the Aerztkammer, the treasurer advocated the creation of an aid fund for elderly physicians and their dependents. He pointed out that, of the 4,000 or more physicians in Greater Berlin, approximately 2,381 have an income not to exceed 3,000 marks ($714). Of these, 312 are more than sixty-five years old. Thirty-six physicians pay no income tax; the taxable income of twenty-six is under 1,000 marks; of forty-three, under 2,000 marks, and of twenty-five, under 3,000 marks. As it may be assumed that an income of less than 3,000 marks is not sufficient to supply ordinary needs, more than one-third of Berlin physicians over sixty-five years of age are in want. Among this number are men who, before the war, could be counted among the well-to-do. In the opinion of the executive committee of the Aerztekammer, a special organization should be created to look after needy physicians, as the ordinary aid fund of a Prussian Aerztekammer is not adequate to the task. To be entitled to aid, physicians must have three years' residence in Berlin, must be eligible to membership in the Aerztekammer, and must not be recipients of a pension. Recipients of aid shall receive such a sum as shall be necessary to raise their income to 3,000 marks ($714) annually. The funds for the project it is proposed to obtain by a 10 per cent increase in the annual dues of the members of Aerztekammer. Certain physicians shall be exempted from the payment of such dues: (1) those who are recipients of a pension; (2) those whose annual income is under 3,000 marks, and (3) those who are exempt from the regular dues of the Aerztekammer. The Aerztekammer adopted these proposals by a large majority. Before they can become effective, however, they must be approved by the supervisory board. —Jour. A. M. A.

FAILURE TO PROTECT BANDAGES AGAINST URINATION

(Lolli vs. Gray (N. J.), 128 Atl. R. 256)

The Court of Error and Appeals of New Jersey, in reversing a judgment which the plaintiff obtained for $5,000 for his daughter, aged twelve years, and for $360 in his own behalf for his expenditures in endeavoring to have his daughter cured of her ailment, says that the daughter fell over a stump and injured her left leg near the hip. She was taken to a hospital, and the defendant was called to attend her. He diagnosed the injury as a fractured femur and treated it accordingly. Several days after the operation, the patient involuntarily urinated one night and wet the bandages. Immediately thereafter the defendant redressed the wound, taking off the soiled bandages, putting on clean strerilized ones and using antiseptics. The case on the argument seems to narrow down to the question as to whether the defendant was negligent in not protecting the bandages on the injury with a rubber cloth, to prevent infection from urination. However, as the child did not wet herself but once, and that was twelve or fourteen days after she had been in the hospital, and several days after the operation, the defendant doubtless was not required to anticipate that she would do that thing. She was beyond the age when involuntary urination is apt to take place. Furthermore, the defendant testified there was a disadvantage in using rubber cloth over bandages. All the medical testimony, and that of the nurses, was that the defendant's treatment was in accord-

ance with standard medical and surgical practice.

The conclusion of the court is that the motion which was made for the direction of a verdict for the defendant should have been granted, and that its refusal was error. A physician and surgeon, in the absence of express contract, is required to exercise only the skill and care ordinarily possessed and exercised by others in the profession.

KEOKUK MEDICAL COLLEGE ALUMNI TO MEET

There will be a meeting of the alumni of the Keokuk Medical College June 6, 1926. It should be remembered that the old Keokuk Medical Alumni were included in the Iowa University Alumni Association at the time that all of the Iowa colleges were consolidated at the State University.

H. C. Young,
Bloomfield, Iowa.

SOCIETY PROCEEDINGS

Carroll County Medical Society

The Carroll County Medical Society met February 18, 1926, at St. Anthony Hospital, where following dinner for the doctors and their wives, the ladies played bridge while the program for the doctors was as follows: Mycloid Leucemia, by Dr. John Jewell of Coon Rapids. Iridocyclitis, by Dr. W. L. McCoakie, Carroll. Case Reports, by Dr. L. W. Chain, Dedham. Skin Manifestations of Toxic Origin other than the Acute Exanthemato, by Dr. Walter Annesberg, Carroll.

Dallas-Guthrie County Medical Society

The last regular meeting of the Dallas-Guthrie County Medical Society was held at Adel, January 21, 1926. Members present, twenty-five.

Officers for 1926 are: President, Dr. H. E. Kleinberg, Redfield; vice-president, Dr. Roy R. Jones, Linden; secretary-treasurer, Dr. S. J. Brown, Panora; delegate, Dr. M. N. Voldeng, Woodward; alternate, Dr. J. W. Harrison, Guthrie Center.

Dr. Brantley Mettauer Johnson, who has recently located at Casey, was elected to membership in the society.

The president appointed Drs. Ross, Free and Doidge as a committee to draft resolutions of respect for Dr. R. P. Eldridge of Dawson. Dr. Eldridge was an active member of the society. He died January 3, 1926, at the Perry hospital from injuries sustained earlier the same day in an auto accident.

The following program was given: Periodic Health Examinations, address by president, Dr. H. E. Kleinberg. The Prevention of Hay Fever by Pre-Seasonal Treatment, Dr. Geo. P. Elvidge. Serum Treatment of Scarlet Fever, Dr. H. C. Hunzleman. Medical Treatment of Disease, Dr. M. N. Voldeng.

All the papers were exceptionally good and were very thoroughly discussed by the members.

The next meeting of the society will be held at the Morlan Hotel, Panora, on April 15, 1926.

S. J. Brown, Sec'y.

Des Moines County Medical Society

Tuesday, March 9, the Des Moines County Medical Society held their regular monthly dinner and meeting at the Hotel Burlington. Doctor Ernest Sachs, clinical professor of neurological surgery, Washington University, St. Louis, gave an illustrated talk on Brain Injuries. At 4 o'clock in the afternoon he held a clinic at the Burlington Hospital.

Tuesday, April 13, the Des Moines County Medical Society will make their annual dissemination of information on the subject of cancer to the public. Dr. Edward H. Skinner of Kansas City who will address the Medical Society that evening on the subject of X-Ray Examination of the Gall-bladder, will make the talk on cancer. In the forenoon he will address the high school assembly; at noon a public meeting of the Service Clubs and the Greater Burlington Association which will be sponsored by the Lions Club; and in the afternoon he will talk to a group of nurses and other interested women at the Burlington Hospital.

Inasmuch as the regular meeting day for May conflicts with the meeting of the State Medical Society, the Des Moines County Medical Society will meet on Tuesday, May 18. Doctors Balfour and McVicar of the Mayo Clinic will furnish the program.

H. R. Peoples, Sec'y.

Fremont County Medical Society

The Fremont County Medical Society met at the office of Dr. Harold Cole, Thurman, Tuesday, February 23. Dinner at 7:00 p. m., followed by program.

Chronic Endocervicitis and Treatment, Max W. Flothow, M.D., Omaha, Nebraska. Convulsions in Infancy, Their Cause and Treatment, Jack V. Treynor, M.D., Council Bluffs. Present Day Surgical Treatment of Spina Bifida, William H. Pruner, M.D., Omaha, Nebraska. The Uses of Digitalis in Heart Disease, A. A. Schultz, M.D., Fort Dodge.

The same officers were re-elected for the ensuing year.

A. E. Wanamaker, Secretary.

Sioux Valley Medical Association

The following clinics were held at Sioux City, January 19, and 20, 1926.

Clinic—Dr. A. Steindler, Iowa City.

Clinic—Dr. H. J. Prentiss, Iowa City.

Clinic—Dr. H. Berglund, Minneapolis, Minnesota.

Clinic—Dr. J. E. Summers, Omaha, Nebraska.

Lecture—Scoliosis, Mechanics, Kinesiology and Principles of Treatment, by Dr. Steindler and Dr. Prentiss.

Lecture—The Management of Chronic Nephritis, by Dr. Berglund.

Lecture—The Practical Management of Some Types of Acute Intestinal Obstruction' by Dr. Summers.

Clinic—Dr. H. Z. Giffin, Rochester, Minnesota.

Clinic—Dr. Floyd Clark, Omaha, Nebraska.

Clinic—Dr. A. S. Hamilton, Minneapolis, Minnesota.

Lecture—The Various Blood Dyscrasias; Splenectomy, by Dr. H. Z. Giffin.

Lecture—What Practical Benefit Can Be Derived from our Present Knowledge of Rickets, by Dr. Floyd Clark.

Lecture—Sub-acute Combined Degeneration of the Cord in Relation to Pernicious Anemia, by Dr. A. S. Hamilton.

Annual banquet at the Hotel Martin, evening of January 20.

AMERICAN BOARD OF OTOLARYNGOLOGY

The American Board of Otolaryngology has arranged for two examinations during the month of April as follows:

St. Paul's Sanitarium, Dallas, Texas, Monday, April 19, at 9 a. m.

Stanford University Medical School, Clay and Webster streets, San Francisco, California, Tuesday, April 27, at 9 a. m.

Applications may be secured from the secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

TRAIN SCHEDULES TO DALLAS, TEXAS

Schedules of the Great Western and Rock Island railroads are given below in the belief that they would be of interest to those planning on attending the American Medical Association at Dallas, Texas.

GREAT WESTERN RAILROAD

Going Trip

Leave Rochester, Minnesota	9:30 P. M. April 17
Leave Waterloo	2:52 A. M. April 17
Leave Marshalltown	4:24 A. M. April 17
Leave **Des Moines**	6:25 A. M. April 17
Arrive Kansas City	12:59 P. M. April 18
Leave Kansas City—MKT	4:30 P. M. April 18
Arrive Dallas—MKT	7:59 A. M. April 19

Return Trip

Leave Dallas, Texas—MKT	8:00 P. M. April 23
Arrive Kansas City—MKT	12:40 P. M. April 23
Leave Kansas City	3:30 P. M. April 23
Arrive **Des Moines**	10:00 P. M. April 24
Arrive Marshalltown	11:46 P. M. April 24
Arrive Waterloo	1:04 A. M. April 24
Arrive Rochester, Minnesota	6:50 A. M. April 25

A special car for doctors will move on this schedule.

ROCK ISLAND RAILROAD

Going Trip

Leave Minneapolis	5:20 P. M. April 17
Leave St. Paul	5:00 P. M. April 17
Leave Albert Lea	7:42 P. M. April 17
Leave Mason City	8:50 P. M. April 17
Leave Iowa Falls	10:00 P. M. April 17
Arrive **Des Moines**	12:01 A. M. April 18
Leave Des Moines	12:16 A. M. April 18
Arrive Kansas City	7:20 A. M. April 18
Leave Kansas City	11:00 A. M. April 18
Arrive Dallas, Texas	7:59 A. M. April 19

Return Trip

Leave Dallas, Texas	8:00 P. M. April 23
Arrive Kansas City	4:15 P. M. April 24
Leave Kansas City	5:00 P. M. April 24
Arrive **Des Moines**	11:40 P. M. April 24

An extra section for doctors will move on this schedule.

Note—The fare from Des Moines to Dallas is $26.12 going and $13.06 returning. Physicians should obtain a **certificate receipt** when they buy their ticket to Dallas or they will not be entitled to half fare on the return trip.

Tom B. Throckmorton,
Secretary.

THE DEPAGE FOUNDATION

The executive committee of the Depage Foundation, under the chairmanship of Prof. Jean Verhoogem, has arranged an intensified campaign to secure funds to carry out a project which will include, (1) the creation of a health center; (2) a subsidy to the laboratory of experimental surgery, and (3) the erection of a memorial. The amount thus far subscribed is 150,000 franks.

ADDITIONAL TROUBLES FOR CHIROPRACTORS

It is reported that John H. Conover, Jersey City, New Jersey, was sentenced September 22 to three months in jail on a charge of practicing medicine without a license.

H. F. Looski, Athens, Illinois, a chiropractor, was fined $100 and costs for practicing without a license.

OBITUARY

Dr. M. F. Riordan was born in County Kerry, Ireland, November 19, 1851, and died in Fulton, New York, December 10, 1925. He made his home at Melrose, Iowa, from 1878 until April 15, 1912. He was married at Melrose, May 2, 1886, to Miss Delia Sullivan. They lived many years at Melrose, loved and respected by all. On April 15, 1912, they went East and made their home at Fulton, New York. Mrs. Riordan died in December, 1912. He was married October 27, 1914 at Pittsfield, Massachusetts to Miss Elizabeth Eldridge. They made their home at Melrose, later going to Fulton where they lived until his death.

He is survived by his wife and one brother, Patrick Riordan of Providence, Rhode Island.

Dr. Riordan was a valuable citizen, always generous to every enterprise for the betterment of mankind. He gave of his means and advice to the up-

building of God's church. This community owes much to him for his service.—Dr. T. A. Moran.

Dr. M. F. Riordan having arrived at his conclusion he then inspired his patient and the family with his own hopeful attitude, and the confidence that he could and would help them to recovery. And this was often half the battle. He was very patient with children, because he loved them and evidently they loved him. He was considerate of the feelings of all classes. He was generous to a fault. He was helpful to those needing help. He was public spirited, taking active part in the betterment of conditions in his community and in the parish. He gave of his means generously, but he also gave of himself, which so often means much more.

He had a keen sense of humor and could use his native Irish brogue with ludicrous effect, though his usual diction was as precise and clean cut as that of any English scholar. He had a keen mind, an active brain, and an unusually fine physique, which served to carry him through the hardships of an exacting practice.

It is interesting to know something of the ancestry of a man like Dr. Riordan. He was born in County Kerry in Ireland, of a line of small farmers and school teachers. For a number of generations this family had lived, farmed, and taught school in this same parish. The Doctor's father was the last of the line who held the position of teacher there.

In 1855, when the subject of this sketch was four years of age, the family came to America, and the father bought a tract of land in Berkshire county, Massachusetts, and farmed there until his death in 1890. There were nine children in the family. Dr. Riordan attended the rural school of Berkshire county, Massachusetts, and in the late sixties came to Iowa depending solely on himself for his support.

Dr. Mark Ranney, superintendent of the State Hospital at Mt. Pleasant, Iowa, gave him a position, as a general utility boy—taking care of his horses, running errands, and whatever he was called upon to do. It was not long till Dr. Ranney was impressed with his intelligence, and his quick and accurate way of sizing up facts, and his ability to do well what was given him to do. Dr. Ranney then mapped out a course of study for him and personally supervised his studies, until he had prepared him for entrance in the medical department of the State University of Iowa. In 1872 then Dr. Ranney furnished him the means and he matriculated in the medical department of Iowa University, and here the loyalty to the faith Dr. Ranney had in him began to tell, as did the inheritance of his simple but sturdy Irish ancestry, for he quickly took rank as a leading student in his class, and his brilliance carried him along as a leader to his graduation as first honor man and valedictorian.

Following this, he received the appointment as assistant physician in the Mt. Pleasant Hospital, under his old patron Dr. Mark Ranney. Here he remained till 1878 when he resigned and began private practice in Melrose.

It was here that he found himself and his work. The people of this community became his friends and his charge. He was known to them all, and trusted by all.

Whether his patient was the owner of broad acres, or belonged to the parish poor, they received the best of his services. He was equally at home with the humble toiler and with the refined professional man.

When he retired from this field of his active work, to manage his affairs in a distant state, his going was regretted by all, but it was felt that he had earned a rest, but would return to them from time to time, and this he did to the last year of his life.

His death occurred away from his long time friends of this community, but I have no doubt they were much in his mind in those last weeks of his life, as he was in theirs, and his memory will always remain among these people to all of whom he had been for so many years the medical adviser, but more than that, the staunch and understanding friend. —H. C. Eschbach.

Dr. G. A. Thieme died at his home in Cantril, Iowa, January 21, 1926, at the age of fifty-seven years. He was a graduate of Keokuk Medical College, and has been a practicing physician in Cantril for thirty-one years. He is survived by his wife, one son, and four daughters.

Dr. Horace R. Chapman died at his home in Bennett, February 1, 1926, after a brief illness of heart disease. Dr. Chapman was born June 20, 1873, in Monticello, attended Cornell College three years, later taking his degree from the Iowa State University from which he graduated in 1901. He settled in Bennett the same year and practiced medicine there until the time of his death. On September 15, 1897, he married Miss Pearl Heiner of Maquoketa.

Dr. H. S. Rogers of Red Oak, eighty-two years of age, a practitioner of Red Oak for over forty years, died at the Red Oak Hospital February 3, 1926. He had been in feeble health for several months in consequence of a broken hip. Dr. Rogers was born in Uniontown, Pennsylvania, January 24, 1844. He enlisted from Henry County, Iowa, as a private in Company D, 14th Iowa Infantry and served until the end of the war. He was mustered out of service June, 1865 at Davenport. He entered Whittier College of Salem, Iowa, and completed a course of instruction in 1871. In 1872 and 1873 he was a student in the medical department of the Michigan University and went from there to Eldora where he was assistant superintendent and physician of the state reformatory. In 1875 he was made superintendent of the institution, but soon after resigned to complete his course of medicine at Keokuk, where he graduated in 1876. He first located at Grand View, Iowa, where he practiced for eight years, but in 1885 located in Red

Oak. He was married at Salem, Iowa, November 26, 1873, to Miss Isabella Cramer. Mrs. Rogers died in Red Oak, December 12, 1914.

Dr. C. F. Kellogg of Clinton died February 12, 1926, at his home on First avenue from infirmities incident to old age.

Dr. Charles Frost Kellogg was born in Kirkland county, Ohio, January 20, 1843. The family came to Webster City in 1856, and later moved to Algona. Dr. Kellogg studied medicine in Chicago and practiced there for a few years. He married Sarah Ann Tennery in 1867, and later came to Lyons where he practiced, also in Clinton and Charlotte. Mrs. Kellogg died in 1885. Later Dr. Kellogg married Nellie Orcutt McCone.

About twenty-five years ago he married Arvila Winsterween-Doyne, who survives him. Dr. Kellogg enlisted at Creston in the 21st Iowa Regiment Infantry and served during the war. He died at the age of eighty-three years. He was always interested in local politics and for several years served as coroner of Clinton county.

My father, Ephraim Plummer, died at my residence in New York City, in his eighty-first year, on March 3, 1926.

He was connected with Parke, Davis & Co. for many years and traveled Iowa and Nebraska from 1892 to 1902. He was respected and I believe thought much of by those who knew him in the medical profession as well as in the drug trade.

I thought a notice in the Iowa State Medical Journal would reach many of his old friends, who have not heard of him in many years.

Trusting that you will accept my best wishes and extend the same to any of the old faculty who tried their hardest to instill some knowledge into the craniums of we rough necks in Des Moines.

With kindest personal regards and hoping the years are resting lightly on your shoulders, I am,

Very gratefully yours,

Harry E. Plummer.

Dr. Charles A. Adams, a colored physician, died at Mercy Hospital, Des Moines, January 26, 1926, after a short illness, aged forty-eight years.

Dr. Adams had been a resident of Des Moines for five years. He practiced in Texas fifteen years prior to coming to Des Moines. He was a member of the Polk County Medical Society and served on the staff of the Methodist Hospital.

Dr. Adams was a member of the Elks, Masons, Woodmen, Knights of Pythias and Odd Fellow lodges.

Besides his wife, he is survived by one son, who graduated from Howard Medical College at Washington, D. C., this year; one daughter Milbra; a brother, Lemuel Adams of Cleveland, Ohio, and two sisters, Mrs. Hamilton and Miss Thigpen, both of Alabama.

BOOK REVIEWS

PHYSICAL CHEMISTRY IN BIOLOGY AND MEDICINE

By J. F. McClendon, Ph.D., Professor of Physiologic Chemistry, University of Minnesota Medical School, and Grace Medes, Ph.D., Assistant Professor of Physiologic Chemistry, University of Minnesota Medical School. Octavo of 425 Pages, Illustrated. W. B. Saunders Company, 1925, Cloth, $4.50 Net.

The book before us is truly a scientific work on medicine and biology in the field of research. Part one is devoted to a consideration of Physio-Chemical in Mass and Volume. The Colloid Particle, The Intermolecular Forces, Osmotic Membranes.

Chapter four, Electrolytic Dissociation and Chemical Equivalents. Chapter five, Hydrogen Ions.

We note the titles of the first five chapters to indicate the character of the book. It is said that the student who uses this book should be well advanced in mathematics and physics.

ON THE BREAST

By Duncan C. L. Fitzwilliams, C.M.G. M.D., Ch.MF.R.C., Ed. and Eng. Surgeon-in-Charge of Out-Patients and Lecturer on Operative Surgery to St. Mary's Hospital; Surgeon of Paddington Green Children's Hospital and to Mount Vernon Hospital for Tuberculosis, London, England. C. V. Mosby Company, St. Louis, Missouri. Price, $10.00.

This interesting book by an English author presents much of value. In the author's foreword he notes the disadvantages of the absence of organized teamwork in England as compared with America in the production of medical work.

The two first chapters are devoted to the development and anatomy of the breast, followed by a chapter on Congenital Abnormalities of the Breast, and another chapter on Abnormalities and Curiosities in Development and Secretion, with many illustrations. These two chapters are of much interest and are not usually found in books on the breast and are the result of extensive investigation. Suppuration of the Breast, Other Abscesses, Lobar Mastitis, receive considerable attention.

The title of chapter eight especially attracted our attention—Hysterical Breast. Several cases of this condition are related. One chapter on Parenchymatous Hypertrophy is presented with illustrations and is particularly interesting. The question of Tubercle of the Breast is discussed from an historical and pathological point of view. It is admitted that primary tuberculosis of the breast is a rare disease. Anspach has collected sixty-five cases, Daver ninety-four cases, and Durante 150 cases. Chapters are given on Syphilis, on Actinomycosis and Cysts of the Breast. An interesting chapter is presented on Chronic Interstitial Mastitis.

The remainder of the book is devoted to Tumors of the Breast, including Sarcoma and Carcinoma with Operative Procedures. Under the head of Operative Mortality, it is found to vary from one per cent in 2133 cases (Rodman) to 5 per cent in a series of 609 cases (Judd). The per cent of cures is difficult to determine on account of the time of operation after the appearance of the disease, that is, early or late operation. There are other factors also that make statistics of uncertain value. It is admitted that the prognosis after second operations is very bad.

The last chapter is devoted to x-ray and radium treatment, without very definite conclusions.

TUBERCULOSIS IN CHILDREN

A Review of the Mortality During the Past Quarter Century in New York City. By Gordeas J. Drolet. New York Tuberculosis and Health Association.

TUBERCULOSIS MENINGITIS IN CHILDREN

A Statistical Study of the Disease from Birth to Fifteen Years of Age. By Beatrice Slayton Herben and M. Alice Asserson. New York Tuberculosis and Health Association.

Recent studies of the New York Tuberculosis and Health Association, reports of which are enclosed, show that striking progress has already been achieved in protecting childhood and saving lives. Secondly, additional knowledge and vantage ground has also been secured from which to attack the still remaining serious condition of tuberculous meningitis in children.

Mr. Drolet, the statistician of the research service of this association, points out that, whereas twenty-five years ago in New York City, when there were close on to a million children under fifteen years of age, 1,370 deaths from tuberculosis occurred, in 1923 only 547 took place, though the child population had increased by almost three-quarters of a million (to 1,679,252)—a reduction in the death rate from 136 per 100,000 to 33, or by 78 per cent.

Mr. Drolet attributes in part the more effective prevention of tuberculosis first to the spread of knowledge about contagion and, secondly, to a number of important health measures which have removed in large part massive infection of children: namely, hospital care of the sick with segregation from their families; systematic disinfection, cleaning and renovation of the former homes of consumptives by the health department; examination of food handlers; and, above all, the practically general pasteurization of the milk supply.

Tuberculous meningitis, as Dr. Herben and Dr. Asserson point out, remains the most fatal form of tuberculosis that attacks children. They have collected valuable information concerning the outstanding facts of this serious condition from an intensive investigation made in cooperation with the health department of New York City. Institutions and homes were visited, hospital and tenement house records traced, autopsy findings collected and spinal fluids examined.

Dr. Herben and Dr. Asserson report that in tuberculous menginitis a history of contact with cases of active tuberculosis was found in the majority of cases. This form of infection was most prevalent in congested districts and in tenement houses. Most sources of infection were of a human type and only rarely milk-borne. Otitis media, measles, pneumonia and whooping cough in children in contact with active tuberculosis carry a particular menace; the largest mortality from tuberculous menigitis occurred in very young children. Cases among Italians were disproportionately high; springtime seemed the season of greatest mortality. In spinal fluid containing tubercle bacilli, 94 per cent was of the human type and only 6 per cent of the bovine.

The seriousness of tuberculous meningitis and the great rarity of recovery from it indicate the extreme importance of preventive measures against tuberculosis.

A TEXT-BOOK OF GENERAL BACTERIOLOGY

By Edwin O. Jordan, Ph.D., Professor of Bacteriology in University of Chicago and in Rush Medical College. Eighth Edition, Thoroughly Revised. Octavo of 752 Pages, Fully Illustrated. W. B. Saunders Co., Cloth, $5.00 Net.

This book is the outgrowth of lectures given at the University of Chicago on bacteriology during the past few years. In preparing the eighth edition, some additions have been made to bring it to date, particularly in relation to some new subjects under discussion.

TREATMENT OF KIDNEY DISEASES AND HIGH BLOOD-PRESSURE

By Frederick M. Allen, M.D., Part One, Practical Manual for Physicians and Patients. The Psychiatric Institute, Morristown, New Jersey.

This book is offered to the medical profession as a guide to the practitioner and his patient in the management of cases of kidney diseases. The author recognizes the difficulty of gaining the cooperation of patients suffering from cardiorenal disease in relation to diet. Patients with chronic renal disease and hypertension are suffering from an affection which is not amenable to drugs, have a hope of prolonged life and comfort only by proper hygienic and diet management, it therefore becomes highly important that there should be a cooperative understanding between physician and patient. The purpose of this book is to point out how this cooperation may be effected. There are many associated conditions to be considered, to render life comparatively safe, which the author indicates. The significance of high and low blood-pressure upon

which the patient is apt to place so much stress is pointed out, and many important and useful facts may be found helpful to both physician and patient.

BULLETIN OF THE NEW YORK ACADEMY OF MEDICINE

Annual Report for the Year 1924.

The New York Academy of Medicine was instituted in 1847. It has carried on its roll of members a long list of distinguished names whose contributions to medical sciences have been of great value.

THE ARMY MEDICAL BULLETIN

Number 13—The Medical Regiment.
Number 15—Military Sanitation.

These Army Medical Bulletins are published from time to time for the general dissemination of information relating to administration reports, statistics of disease, medical department training projects, and other matters of a medico-military nature, to members of the medical department of the Army of the United States, Regular Army, National Guard and Organized Reserve.

ADVANCING THE SCIENCE OF CHEMISTRY

Published by The Johns Hopkins Half-Century Committee.

NEW AND NON-OFFICIAL REMEDIES

In addition to the articles enumerated in our letter of December 26, 1925, the following have been accepted:

Swan-Myers Company:

Bermuda Grass Concentrated Pollen Extract—Swan-Myers; Costal Sagebrush Concentrated Pollen Extract—Swan-Myers; Johnson Grass Concentrated Pollen Extract—Swan-Myers; Red-Root Pigweed Concentrated Pollen Extract—Swan-Myers; Sunflower Concentrated Pollen Extract—Swan-Myers; Sweet Vernal Grass Concentrated Pollen Extract—Swan-Myers.

DIRECTORY OF PHYSICIANS OF THE ELEVENTH COUNCILOR DISTRICT OF IOWA

Prepared by G. C. Moorehead, Ida Grove, Iowa, February, 1926

BUENA VISTA COUNTY

Albert City, Population 567

Bridge, Barton B.; b. 1871; Queens, 1900.
Werner, Carl A. A.; b. 1872; Univ. Neb., 1898.

Alta, Population 1290

Herron, David A.; b. 1884; Purdue, Ind., 1907.
Morrison, Jno. W.; b. 1878; Univ. Ill., 1904.

Linn Grove, Population 433

Pease, Chester I.; b. 1865; Rush, 1889.
Van Ness, Chas. S.; b. 1874; Queens, 1904.

Marathon, Population 520

Delahunt, Jos.; b. 1860; Toronto U., 1889.
Kelley, Thos. J.; b. 1868; Rush, 1901.

Newel, Population 809

Armstrong, Max A.; b. 1884; Ind. S. of Med., 1911.
Foley, Fred C.; b. 1868; Rush, 1894.

Sioux Rapids, Population 868

Campbell, Thos. R.; b. 1887; S. U. I., 1909.
Oberg, Oscar; b. 1872; Min. C. of P. & S., 1898.
Swallum, Troy W.; b. 1891; Gen. Med. Col., 1919.

Storm Lake, Population 3658

Banghart, Edgar D.; b. 1870; Univ. Neb., 1907.
Farnsworth, Harold E.; b. 1890; S. U. I., 1917.
Gran, Albert G.; b. 1889; Northwestern, 1917.
Kelly, Bernard C.; b. 1860; Gen. Med. Col., 1887.
Musbaum, David H.; Western Reserve, 1885.
O'Donoghue, Jas. H.; b. 1868; Ill. Med. Col., 1904.
Rogers, Math. C.; b. 1882; Univ. Pa., 1907.
Smith, Edgar F.; b. 1873; S. U. I., 1908.
Swallum, Jas. A.; b. 1873; Gen. Med. Col., 1901.

County Statistics

Number physicians in 1880	13
Number physicians in 1910	24
Number physicians in 1915	22
Number physicians in 1925	22
Average age in 1915	47
Average age in 1925	49
Population to physician in 1910	666
Population to physician in 1915	783
Population to physician in 1925	843

CHEROKEE COUNTY

Aurelia, Population 708

Bates, Ernest G.; b. 1881; Drake, 1913.
Eddy, Alfred H.; b. 1870; Rush, 1896.

Cherokee, Population 4,552

Allen, Paul E.; b. 1883; S. U. I. Hom., 1910.
Angur, Alex; b. 1888; Hungary, 1914.
Burlingame, Jno. H.; b. 1848; Rush, 1878.
Cleaves, Prentis B.; b. 1879; Univ. Mich., 1902.
Donohue, George; b. 1876; Harvard, 1898.
Duffy, Francis M.; 1896; Creighton, 1923.
Edgar, Nelson; b. 1877; Rush, 1902.
Fleming, Margaret A.; b. 1863; Trinity Ont., 1894.
Hall, Clarence H.; b. 1877; Med. Chi. Pa., 1904.
Johnson, Chester H.; b. 1885; Gen. Med. Col. Chi., 1906.
Merrick, Jno. H.; b. 1872; McGill, 1895.
Miller, Fisher B.; b. 1883; Univ. Pa., 1909.
Pop, John M.; b. 1896; Roumania, 1920.
Seaman, Roy C.; b. 1878; Bennett Chi., 1906.
Spinharney, Lester G.; b. 1899; Creighton, 1923.
Watson, Geo. L.; b. 1859; Keokuk, 1897.
Wescott, LeRoy A.; b. 1871; S. U. I., 1901.
Wise, Jas. H.; b. 1897; S. U. I., 1922.

Cleghorn, Population 232

Ihle, Chas. W.; b. 1878; S. U. I. Hom., 1906.

Larrabee, Population 206

Jacobs, Orange F.; b. 1888; Ensworth Mo., 1913.

Marcus, Population 1,091
Joynt, Michael F.; b. 1883; S. U. I., 1910.
Knox, Thos. C.; b. 1884; S. U. I., 1908.

Meriden, Population 218
Mauer, Geo. A.; b. 1885; S. U. I., 1912.

Quinby, Population 363
Adams, Evart H.; b. 1876; Rush, 1897.
Brewer, Lewis S.; b. 1870; S. U. I., 1896.

Washta, Population 508
Adams, Hicks L.; b. 1881; Univ. Ill., 1903.
Talmage, Geo. G.; b. 1869; Univ. Ill., 1901.

County Statistics

Number physicians in 1880	7
Number physicians in 1910	30
Number physicians in 1915	32
Number physicians in 1925	24
Average age in 1915	45
Average age in 1925	46
Population to physician in 1910	645
Population to physician in 1915	615
Population to physician in 1925	740

CLAY COUNTY

Dickens, Population 337
Bruce, James H.; b. 1877; Gen. Med. Col. Chi., 1906.

Everly, Population 480
DeGarzon, Harry G.; b. 1871; Nat. Med. U. Chi., 1904.
Snyder, D. C.; b. 1896; S. U. I., 1919.

Greenville, Population 167
Winter, Clyde C.; St. L. C. of P. & S., 1906.

Peterson, Population 580
Nash, Edwin A.; b. 1875; Keokuk, 1904.

Royal, Population 362
Adams, Glenn W.; b. 1896; S. U. I., 1922.
Jones, Daniel S.; b. 1865; Trinity, Toronto, 1895.

Spencer, Population 4,599
Collester, Chas. C.; b. 1885; Jefferson, 1909.
Greene, Hiram O.; b. 1870; St. L. Col. P. & S., 1895.
Harvey, Orlando E.; b. 1887; Univ. of O., 1912.
Johnston, Thomas H.; b. 1871; Queens, Ont., 1900.
Munger, Elbert E.; b. 1867; S. U. I., 1894.
Sokol, John M.; b. 1876; Rush, 1902.
Wertz, John B.; b. 1866; S. U. I., 1892.
Wertz, Minerva P.; b. 1871; S. U. I., 1893.

Webb, Population 219
Rust, Emery A.; b. 1880; Jefferson, 1904.

County Statistics

Number physicians in 1880	7
Number physicians in 1910	19
Number physicians in 1915	17
Number physicians in 1925	16
Average age in 1915	42
Average age in 1925	48
Population to physician in 1910	677
Population to physician in 1915	850
Population to physician in 1925	975

DICKINSON COUNTY

Lake Park, Population 788
Bullock, Wm. E.; b. 1871; S. U. I., 1901.
Leonard, Earl R.; b. 1889; Univ. Neb., 1916.

Milford, Population 908
Coldren, Cassius M.; b. 1860; Univ. Mich., 1889.
Coldren, C. M. Jr.; b. 1892; Rush, 1919.
Fuller, Quintus C.; b. 1867; Drake, 1982.
Smith, Arthur F.; b. 1891; Univ. Minn., 1920.
Smith, Ferd. J.; b. 1862; S. U. I., 1887.

Spirit Lake, Population 1,701
Eppley, Clarence O.; b. 1882; Univ. Ill., 1910.
Grimm, Peter G.; b. 1871; Rush, 1893.
Schultz, Chas. S.; b. 1863; S. U. I., 1891.

Terrill, Population 440
Schooley, Alfred H.; b. 1871; S. U. I., 1902.

County Statistics

Number physicians in 1880	3
Number physicians in 1910	10
Number physicians in 1915	8
Number physicians in 1925	11
Average age in 1915	43
Average age in 1925	50
Population to physician in 1910	813
Population to physician in 1915	1,183
Population to physician in 1925	931

IDA COUNTY

Battle Creek, Population 785
Benedict, Edgar P.; b. 1885; S. U. I., 1910.
Hartley, Geo. A.; b. 1882; S. U. I., 1908.
Millice, Glenn S.; b. 1883; Kan. Med. Col., 1911.
Stoakes, Chas. S.; b. 1877; Univ. Neb., 1907.

Galva, Population 339
Bilby, A. M.; b. 1855; Keokuk, 1882.
Grubb, Merrill, W.; b. 1885; Univ. Ill., 1912.

Holstein, Population 1,248
Bretthauer, Carl G.; b. 1895; S. U. I., 1920.
Crane, Geo. H.; b. 1868; S. U. I., 1896.
Putnam, Chester L.; b. 1886; S. U. I., 1912.

Ida Grove, Population 2,020
Armstrong, Robt. B.; b. 1884; Univ. Pitt., 1910.
Bookhart, Edw. W.; b. 1880; Lincoln Med. C. Neb., 1906.
Heilman, Ernest S.; b. 1879; Rush, 1901.
Houlihan, Thos. J.; b. 1876; Rush, 1902.
Moorehead, Giles C.; b. 1856; S. U. I., 1879.
Parker, Edw. S.; b. 1881; S. U. I., 1908.

County Statistics

Number physicians in 1880	12
Number physicians in 1910	18
Number physicians in 1915	17
Number physicians in 1925	15
Average age in 1915	44
Average age in 1925	48
Population to physician in 1910	628
Population to physician in 1915	686
Population to physician in 1925	778

LYONS COUNTY

Alvord, Population 359
Blair, Sam'l. E.; S. U. I., 1894.

Doon, Population 576
Bild, Elmer J.; b. 1877; Sioux City, 1903.

George, Population 788
Chalmers, Francis E.; b. 1874; Univ. Toronto, 1904.
McKinney, Oliver B.; b. 1863; Med. Col. Ind., 1885.

Inwood, Population 746
Dehl, Peter I.; b. 1882; Northwestern, 1908.
Lewis, David W.; b. 1859; S. U. I., 1892.
Stewart, Alex. P.; b. 1879; Univ. Toronto, 1905.

Larchwood, Population 441
Druet, Arthur L.; b. 1877; Drake, 1898.
Holtsclaw, Zach. T.; b. 1847; S. U. I., 1881.

Little Rock, Population 573
Acilts, Erko S.; b. 1889; Rush, 1915.

Rock Rapids, Population 2,172
Boetel, Geo. H.; b. 1882; Creighton, 1907.
Corcoran, Louis L.; b. 1876; Northwestern, 1907.
Crowley, Jay M.; b. 1879; Northwestern, 1903.
North, Ada P.; b. 1864; Gen. Med. Col. Chi., 1895.
Wallace, Geo. C.; b. 1851; Keokuk, 1877.

County Statistics

Number physicians in 1880	5
Number physicians in 1910	20
Number physicians in 1915	17
Number physicians in 1925	15
Average age in 1915	45
Average age in 1925	53
Population to physician in 1910	731
Population to physician in 1915	903
Population to physician in 1925	1,032

MONONA COUNTY

Blencoe, Population 317
Lacy, Geo.; Keokuk, 1883.

Castana, Population 389
Gingles, Wm. W.; b. 1867; Ky. School of Med., 1890.
Minthorn, Martin F.; b. 1864; Ecl. Med. Col. O., 1888.

Mapleton, Population 1,367
Ingham, Paul G.; b. 1890; S. U. I., 1917.
Stodden, Frank J.; b. 1894; Creighton, 1917.

Onawa, Population 2,256
Deering, John S.; b. 1893; Univ. Neb., 1919.
Gingles, Rush R.; b. 1870; Louisville, 1893.
Schoffler, Felix J.; b. 1886; Creighton, 1910.
Talboy, Jas. H.; b. 1860; S. U. I., 1884.
Young, Clifford W.; b. 1886; S. U. I. Hom., 1911.

Rodney, Population 176
Allison, Arthur L.; b. 1876; Creighton, 1902.

Soldier, Population 281
Junger, Emil C.; b. 1874; Sioux City, 1902.

Ute, Population 580
Sherlock, John H.; b. 1879; Purdue, Ind., 1906.

Whiting, Population 625
Harman, Clarence; b. 1875; Starling, 1898.
Stauch, Martin O.; b. 1890; S. U. I., 1911.

County Statistics

Number physicians in 1880	5
Number physicians in 1910	20
Number physicians in 1915	20
Number physicians in 1925	15
Average age in 1915	39
Average age in 1925	46
Population to physician in 1910	665
Population to physician in 1915	868
Population to physician in 1925	1,141

OBRIEN COUNTY

Archer, Population 184
Kiely, Michael D.; b. 1860; Scotland, 1885.

Calumet, Population 268
Mutschmann, P. N.; b. 1896; S. U. I., 1922.

Hartley, Population 1,306
Cashman, Chester F.; b. 1881; Drake, 1908.
Conaway, John W.; b. 1860; Drake, 1885.
Hand, Wm. C.; b. 1877; Northwestern, 1906.
Pfeiffer, Ernest; b. 1873; Lincoln, Neb., 1914.

Primghar, Population 972
Arnold, Thomas; b. 1884; Keokuk, 1908.
Avery, H. L.; b. 1880; Univ. Ill., 1905.
Wagner, Jas. A.; b. 1881; Univ. Ill., 1905.

Paullina, Population 987
Dudley, Edwin; b. 1856; Rush, 1886.
Hamilton, Wm. A.; b. 1872; S. U. I. Hom., 1900.
Oldag, Geo. C.; b. 1879; S. U. I., 1907.
Weems, Neve.; b. 1894; S. U. I., 1919.

Sanborn, Population 1,497
Horton, Frank W.; b. 1870; S. U. I. Hom., 1894.
Levy, James W.; b. 1893; N. West. Tenn., 1915.

Sheldon, Population 3,488
Brackney, Herman J.; b. 1881; S. U. I., 1905.
Brock, Walter R.; b. 1870; Drake, 1894.
Cram, Fredk. W.; b. 1854; Rush, 1878.
Longshore, C.; b. 1842; Phil. U. of Med., 1872.
Myers, Frank L.; b. 1865; Univ. Ill., 1888.
Myers, Judson W.; b. 1889; S. U. I., 1915.
Myers, Lynn L.; b. 1893; S. U. I., 1916.
Vermeen, Garrett E.; b. 1882; Northwestern, 1911.

Sutherland, Population 876
Dahlbo, John E.; b. 1885; Chi. C. of M. & S., 1915.
Kas, Thomas D.; b. 1883; Wis. Col. P. & S., 1909.

County Statistics

Number physicians in 1880	5
Number physicians in 1910	24
Number physicians in 1915	28
Number physicians in 1925	25
Average age in 1915	47
Average age in 1925	49
Population to physician in 1910	719
Population to physician in 1915	664
Population to physician in 1925	762

OSCEOLA COUNTY

Ashton, Population 610

Reinsch, Frank; b. 1894; Chi. C. of M. & S., 1917.

Harris, Population 359

Sporre, Knute A.; b. 1892; S. U. I., 1919.

Melvin, Population 282

McCononzhey, Freeman E.; b. 1874; Marion Sims, 1899.

Ocheyedan, Population 686

Lass, Daul G.; b. 1858; Vanderbilt, 1886.
Padgham, James B.; b. 1883; S. U. I., 1909.

Sibley, Population 1803

Farnum, Earl P.; b. 1877; S. U. I. Hom., 1898.
Heetland, Louis H.; b. 1868; Detroit, 1895.
Hough, Frank S.; b. 1864; Detroit, 1890.
Winkler, Frank P.; b. 1882; Univ. Ill., 1906.

County Statistics

Number physicians in 1880	2
Number physicians in 1910	11
Number physicians in 1915	13
Number physicians in 1925	9
Average age in 1915	46
Average age in 1925	49
Population to physician in 1910	814
Population to physician in 1915	782
Population to physician in 1925	1,129

PLYMOUTH COUNTY

Akron, Population 1,324

Bruner, Walter J.; b. 1882; Northwestern, 1909.
Kerr, Johnston H.; b. 1877; Univ. Neb., 1904.
Mattison, Geo.; b. 1887; Creighton, 1913.

Hinton

Fletcher, Fredk. W.; b. 1880; Creighton, 1912.

Kingsley, Population 1,072

Liechty, Ernest J.; b. 1879; Drake, 1905.
Wolcutt, Jas. R.; b. 1855; Hos. Col. Med. Ky., 1883.
Wendel, Benj. F.; b. 1877; Sioux City, 1906.

LeMars, Population 4,683

Cole, Thos. E.; Univ. Ill., 1890.
Downing, Wendell L.; b. 1896; Univ. Minn., 1920.
Fettes, Jas. M.; b. 1879; Trinity, Ont., 1904.
Joynt, Martin J.; b. 1878; S. U. I., 1905.
Lamb, Joseph A.; b. 1875; Univ. M. C. of K. C., 1904.
Larsen, Wm. W.; b. 1884; S. U. I., 1913.
McPhaden, Arch. C.; b. 1884; Bennett, 1911.
Mosher, Arthur H.; b. 1859; Rush, 1882.
Reeves, Jesse L.; b. 1872; Drake, 1896.
Richey, Milton W.; b. 1854; Ky. S. of Med., 1876.
Rubel, Harry F.; b. 1878; Univ. Ill., 1904.
Shepard, Wm. T.; b. 1865; Gen. Med. Col., 1888.

Merrill, Population 633

Maffzigar, Armand; b. 1876; Ill. Med. Col. 1904.
Vernon, Fredk. G.; b. 1882; Toronto U., 1906.

Remsen, Population 1,144.

Jastram, Alfred H.; b. 1871; Sioux City, 1897.
McGovern, Jas. E.; b. 1869; Rush, 1902.

County Statistics

Number physicians in 1880	7
Number physicians in 1910	25
Number physicians in 1915	20
Number physicians in 1925	23
Average age in 1915	39
Average age in 1925	49
Population to physician in 1910	925
Population to physician in 1915	1,188
Population to physician in 1925	1,025

SAC COUNTY

Auburn, Population 568

Fobes, Henry L.; b. 1870; S. U. I., 1897.

Early, Population 568

Anderson, Geo. W.; b. 1871; S. U. I. Hom., 1901.
Graham, John W.; b. 1859.

Lake View, Population 838

Speaker, Everett E.; b. 1876; S. U. I. Hom., 1897.

Lytton, Population 200

Blair, Fred L.; b. 1879; S. U. I., 1905.

Odebolt, Population 1,445

Groman, August; b. 1856; Chicago Hom., 1878.
Hart, Wm. E.; b. 1870; Univ. Ill., 1903.
McAllister, James; b. 1892; Creighton, 1914.
Stillman, Wayne L.; b. 1873; Univ. Ill., 1902.

Sac City, Population 2,630

Findley, Wm. J. K.; b. 1860; Northwestern, 1894.
McCarl, J. J.; b. 1880; Creighton, 1907.
Stalford, John H.; b. 1869; Drake, 1892.
Swearingen, Guy H.; b. 1881; Drake, 1911.

Schaller, Population 731

McCray, Frank H.; b. 1866; Sioux City, 1896.
Dewey, Jay R.; b. 1891; Univ. Ill., 1922.

Wall Lake, Population 737

Hayden, Arthur S.; b. 1862; S. U. I. Hom., 1896.
Jones, Louis H.; b. 1870; S. U. I., 1894.

County Statistics

Number physicians in 1880	12
Number physicians in 1910	21
Number physicians in 1915	18
Number physicians in 1925	17
Average age in 1915	47
Average age in 1925	54
Population to physician in 1910	788
Population to physician in 1915	946
Population to physician in 1925	1,030

SIOUX COUNTY

Alton, Population 1,007

Gleysteen, Dirk J.; b. 1881; Rush, 1905.
Miller, Henry E.; b. 1851; St. L. C. of P. & S., 1895.

Boyden, Population 419

Balstad, Hamilton A.; b. 1884; S. U. I., 1913.
Brink, Melber; b. 1851; Rush, 1884.
Kuyper, Will; b. 1884; Drake, 1911.

Granville, Population 358

Fink, Anthony L.; b. 1881; Austria, 1910.

Hawarden, Population 2,491

Doolittle, Marshall E.; b. 1851; Univ. Mo., 1881.
Gardner, Linwood C.; b. 1897; S. U. I., 1921.

Meyer, Albert J.; b. 1883; Univ. Louisville, 1910.
Null, Fredk. F.; b. 1878; Sioux City, 1907.
Roark, Geo. L.; b. 1884; Northwestern, 1918.
Roland, Chas. L.; b. 1867; Creighton, 1895.

Hospers, Population 570

Galman, Jas. J.; b. 1872; Detroit, 1897.

Hull, Population 791

Maris, Gerrit; b. 1882; S. U. I., 1906.
Samuelson, Carl A.; b. 1893; S. U. I., 1923.

Ireton, Population 730

Bendixen, Fredk. C.; b. 1893; S. U. I., 1920.
McCaughan, Thos. E.; b. 1870; Rush, 1895.

Maurice, Population 329

Oggel, Herman D.; b. 1873; Rush, 1900.

Orange City, Population 1,632

DeBey, Albert; b. 1861; Rush, 1884.
DeBey, John G.; b. 1884; Drake, 1910.
DeLespinasse, A. T. H.; b. 1874; S. U. I., 1901.
Fisher, Chester V.; b. 1894; S. U. I., 1919.
Jongewaard, Jeannette; b. 1884; Univ. Ill., 1924.
Oggel, H. P.; Northwestern, 1867.

Rock Valley, Population 1,347

Bradshaw, Saml. M.; b. 1854; Louisville Med. Co., 1886.
Huizenga, Richard; b. 1876; Rush, 1902.
Lock, Arthur L.; b. 1885; S. U. I. Hom., 1913.

Sioux Center, Population 1,389

DePree, Seine B.; b. 1873; Rush, 1903.
Maris, Wm.; b. 1890; St. L. Univ., 1917.

County Statistics

Number physicians in 1880	3
Number physicians in 1910	30
Number physicians in 1915	22
Number physicians in 1925	29
Average age in 1915	43
Average age in 1925	48
Population to physician in 1910	841
Population to physician in 1915	1,152
Population to physician in 1925	912

WOODBURY COUNTY

Anthon, Population 635

Cauley, Francis P.; b. 1883; Creighton, 1910.
Leonard, Bertram B.; b. 1878; S. U. I., 1908.

Bronson, Population 100

Glann, Roy C.; b. 1878; Sioux City, 1905.

Correctionville, Population 1,016

Oates, Junius K.; b. 1890; Emory Univ., 1916.
Smith, Homer A.; b. 1881; S. U. I., 1906.

Cushing, Population 286

Bullock, Alfred H.; b. 1873; Sioux City, 1900.

Danbury, Population 677

Happe, Francis A.; b. 1877; S. U. I., 1905.
Murphy, John J.; b. 1886; Creighton, 1911.

Hornick, Population 245

Byerly, Andrew J.; b. 1861; S. U. I., 1887.
Frear, Chas. E.; b. 1889; Georgetown Univ., 1916.

Moville, Population 878

Barrick, Ray G.; b. 1889; Hah. Phil., 1911.
Dewey, Wm. H.; b. 1856; S. U. I., 1884.
Hipple, J. W.; b. 1856; Nat. U. of Mo., 1881.
Stolley, J. G.; b. 1877; Creighton, 1905.

Oto, Population 333

Rinker, Geo. E.; b. 1877; Sioux City, 1903.

Pierson, Population 554

Baker, Howard N.; b. 1881; General Med. Ch., 1905.
Raw, Elmer J.; b. 1874; Univ. Ill., 1899.

Sloan, Population 608

Hilts, Mark B.; b. 1859; Rush, 1886.
Prescott, Lee W.; b. 1881; S. U. I., 1905.

Sergeant Bluffs, Population 548

Conmey, Roy M.; b. 1883; S. U. I., 1905.

Smithland, Population 321

Stoll, Louis S.; b. 1845.

County Statistics

Number physicians in 1880	10
Number physicians in 1919	23
Number physicians in 1915	20
Number physicians in 1925	21
Average age in 1915	45
Average age in 1925	50
Population to physician in 1910	860
Population to physician in 1915	1,027
Population to physician in 1925	997

SIOUX CITY

Ackerman, Emma M.; b. 1885; Creighton, 1913.
Amthor, J. G.; b. 1885; Barnes, Mo., 1910.
Anderson, August; b. 1863; U. of Minn., 1891.
Angle, Steuben D.; b. 1851; N. W. St. Joe, 1886.
Ashby, Atchison A.; b. 1861; Rush, 1883.

Ballachey, John E.; b. 1879; Sioux City, 1903.
Barr, Guy E.; b. 1885; Sioux City, 1906.
Bellaire, Roy F.; b. 1884; St. L. U. S. of Mo., 1909.
Berkstresser, Chas. F.; b. 1891; S. U. I., 1921.
Bolton, Ethel M.; b. 1887; Creighton, 1911.
Bowers, Bert A.; b. 1878; S. U. I., 1905.
Bradley, Allen M.; b. 1869; Chi. C. of M. & S., 1910.
Brown, Foster V.; b. 1878; Soiux City, 1905.
Brown, Harold L.; b. 1886; Harvard, 1911.

Carney, Saml. D.; b. 1877; Jefferson, 1903.
Christiansen, Jas.; b. 1871; S. U. I., 1905.
Clingan, Chas. E.; Rush, 1877.
Cobb, Elliott C.; b. 1887; Univ. Neb., 1913.
Cody, W. E.; b. 1888; S. U. I., 1911.
Conley, Willard T.; b. 1885; Northwestern, 1913.
Cotton, Robt. M.; b. 1849; Ann Arbor, 1875.
Courshon, Benj.; b. 1868; Atlanta C. of P. & S., 1901.
Cowan, Isabel E.; b. 1871; Womens' Med. Col. of Pa., 1895.
Cremin, Wm. J. S.; b. 1881; Univ. of Ill., 1906.
Crowder, Roy E.; b. 1896; Rush, 1921.

Daily, Milton; b. 1870; Minn. C. of P. & S., 1895.
Dales, John A.; b. 1860; Rush, 1890.
Darey, J. H.; b. 1861; McGill, 1885.
Dean, Willis W.; b. 1872; Univ. of Neb., 1895.

Decker, Jay C.; b. 1881; Univ. of Neb., 1904.
Devereaux, Richard L.; b. 1889; Bennet, 1915.
Doran, Lyle W.; b. 1898; Creighton, 1923.
Dougherty, John E.; b. 1875; Univ. of Ill., 1904.
Duckworth, John C.; Keokuk, 1894.

Earl, Warren L.; b. 1884; Univ. of Ill., 1913.

Fisher, O.; b. 1857; S. U. I., 1883.
Flagcolle, Jas. W. B.; b. 1888; Sioux City, 1909.
Francherc, Fredk. E., b. 1866; Univ. of Minn., 1890.
Frear, Edwin D.; b. 1854; S. U. I., 1882.

Gibson, Chas. G.; b. 1868; Rush, 1900.
Gillespie, Hamilton S.; b. 1875; Univ. Neb., 1898.
Gillin, Chas. W.; b. 1865; Rush, 1890.
Gittens, Thos. R.; b. 1891; S. U. I., 1915.

Hagedorn, Harry H.; b. 1884; S. U. I., 1909.
Hanchett, Wm. H.; Chi. Hom., 1879.
Hanson, Clarence B.; b. 1874; Sioux City, 1907.
Harrington, Raymond J.; Rush, 1922.
Havens, Florence E.; b. 1876; Sioux City, 1908.
Havens, James A.; b. 1884; Sioux City, 1908.
Helfgott, Max A.; b. 1882; Md. Med. Col., 1912.
Hendrickson, Alvin H.; b. 1888; Creighton, 1917.
Henken, John H.; b. 1891; Northwestern, 1915.
Herman, Lester R.; b. 1891; Northwestern, 1915.
Herren, Carl C.; b. 1885; Univ. Louisville, 1908.
Hope, Frank G.; b. 1883; Sioux City, 1906.
Horner, Kate Z.; b. 1868; Sioux City, 1896.
Hoskins, Sarah B.; b. 1871; S. U. I., 1896.

Isaacson, Leo; b. 1893; Berlin, 1920.

Jenkins, John L.; b. 1898; Univ. Neb., 1922.
Jenkenson, Ernest A.; b. 1872; Univ. Ill., 1903.
Jepson, Wm.; b. 1863; S. U. I., 1886.
Jepson, Wm. Roscoe; b. 1890; Univ. Minn., 1917.
Johnson, Jens A.; b. 1885; Univ. Mich. Hom., 1917.

Katherman, Chas. A.; b. 1877; Rush, 1906.
Keeffe, Pat E.; b. 1886; Jefferson, 1910.
Kilborne, Jay M.; b. 1872; S. U. I. Hom., 1894.
Kline, Saml.; b. 1880; Sioux City, 1908.
Koch, Geo. Wm.; b. 1879; Rush, 1904.
Kuegle, Fredk. H.; b. 1878; Creighton, 1905.

Lande, Jacob N.; b. 1893; Creighton, 1920.
Latchem, Raymond L.; b. 1885; Rush, 1911.
Laurence, John H.; b. 1864; Univ. Mich. H., 1888.

Magoun, Chas. E.; b. 1888; Tufts, 1915.
Maxwell, Chas. T.; b. 1889; Rush, 1912.
McCanon, Wallace C.; b. 1836; Keokuk, 1880.
McDermott, C. J.; b. 1882; Bennett, 1914.
McHugh, Chas. P.; b. 1885; S. U. I., 1908.
McLaughlin, A. J.; b. 1876; Ky. S. of M., 1898.
McLaughlin, P. B.; b. 1873; Ky. S. of M., 1897.
Meis, Edw. W.; b. 1877; S. U. I., 1900.
Melgaard, Bennett A.; b. 1881; Sioux City, 1908.
Moore, Dan'l V.; b. 1881; Creighton, 1905.
Morgan, Earl E.; b. 1893; S. U. I., 1920.
Mosher, Sidney P.; b. 1862; Physic' Med. Ind., 1886.
Murphy, Frank J.; b. 1865; Rush, 1887.
Myers, Jas. E.; b. 1884; Ill. Med. Col., 1907.

Naftzger, Jesse B.; b. 1880; S. U. I., 1904.
Needham, Chas. T.; b. 1889; Creighton, 1912.
Nervig, Isaac E.; b. 1874; S. U. I., 1902.

O'Donoghue, A. F.; b. 1895; S. U. I., 1919.

Palmquist, Nath.; b. 1878; Barnes, 1909.
Park, Elmer R.; b. 1875; Keokuk, 1907.
Peacock, Kenneth C.; b. 1892; Wash. U. of St. L., 1917.
Perkins, Rolla W.; b. 1874; Barnes, 1905.
Pinto, Walter A.; b. 1885; Creighton, 1908.

Reeder, Jas. E.; b. 1887; Drake, 1909.
Robbins, Jesse H.; b. 1870; Sioux City, 1895.
Rogers, Henry C.; b. 1873; U. of Ill., 1898.
Roost, Fredk. H.; b. 1877; Rush, 1902.
Ross, Grant J.; b. 1842; Med. Col. of Ohio, 1867.
Rowley, Wm. G.; b. 1881; Sioux City, 1907.
Rowse, Robt. Q.; b. 1870; Med. Col. of Ohio, 1893.
Runyon, Wm. D.; b. 1886; S. U. I., 1909.

Sallander, Fred W.; b. 1888; S. U. I., 1913.
Sawyer, Prince E.; b. 1874; S. U. I., 1895.
Schott, Geo.; b. 1858; Mo. Med. Col., 1882.
Schwartz, John W.; b. 1898; Univ. Neb., 1923.
Seavey, Mark A.; b. 1878; Sioux City, 1908.
Secoy, Frank L.; b. 1887; S. U. I., 1911.
Seeman, Fredk. A.; b. 1866; General Med. Col. Chi., 1891.
Sibley, Saml. E., b. 1869; S. U. I., 1893.
Simmons, Howard J.; b. 1885; Jefferson, 1911.
Sloan, Arthur N.; b. 1873; S. U. I., 1900.
Spreng, Theo. F. H.; b. 1853; General Med. Col. Chicago, 1879.
St. Onge, Joseph A.; b. 1881; Sioux City, 1907.
Staads, Soeren W.; b. 1869; German Med. Col. Chi., 1892.
Starry, Allen C.; b. 1890; Univ. Mich., 1921.
Stephens, T. C.; b. 1876; P. & S. K. C., 1904.
Summers, Martin P.; b. 1882; Univ. Ill., 1908.
Swanson, John E.; b. 1871; Univ. Ill., 1899.

Taylor, Jas. F.; b. 1867; Bellevue, 1892.
Tharp, Wm. S.; b. 1857; Jefferson, 1879.
Thompson, Chas. F.; Ecl. Ohio, 1888.
Thomson, John A.; b. 1879; Sioux City, 1904.
Thorburn, Oral L.; b. 1897; S. U. I., 1922.
Townsend, Louis J.; b. 1870; Rush, 1896.
Tripp, Leroy R.; b. 1886; S. U. I., 1909.

Valequette, Frank G.; b. 1895; S. U. I., 1922.
Vagsness, Ingman U.; b. 1888; Northwestern, 1913.

Warnock, Francis B.; b. 1859; S. U. I., 1882.
Warren, Alexis N.; b. 1879; Sioux City, 1902.
Warren, John N.; b. 1846; Miami Med. Col., 1871.
Watkin, Clifford R.; b. 1889; Rush, 1914.
Wood, Geo. B.; b. 1871; Chicago Hom., 1898.

Yancey, Chas. C.; b. 1891; Rush, 1922.

City Statistics

Number physicians in 1880	18
Number physicians in 1910	84
Number physicians in 1915	120
Number physicians in 1925	135
Average age in 1915	42
Average age in 1925	45
Population to physician in 1910	569
Population to physician in 1915	514
Population to physician in 1925	563

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SOME FUNDAMENTAL FACTS IN THE DIAGNOSIS OF HEART LESIONS*

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For the last several years a preponderating proportion of the articles which have appeared on diseases of the heart have been devoted to consideration of making diagnoses by means of the orthodiagraph, the polygraph, and particularly of late the electrocardiograph, until at this time a considerable number of the young men think that without these aids a cardiac diagnosis cannot be made. And even amongst the older men there has arisen the feeling that these instruments of precision, or, perhaps better put, instruments of record, are necessary, and this in spite of the fact that there is no field in the whole range of medicine wherein clinical diagnosis has been for more years more accurate than in regard to diseases of the heart, providing the men utilize the information which is at hand and could be used. They do not, however, always use it. I think one of the most striking lectures I ever heard was one given in the war period by a man who was a cardiac consultant. I may be wrong in drawing the impression that I did, but he gave that lecture as though he was talking a lot of stuff that was perfectly new, and yet all of it was anywhere from 75 to 150 years old; there was not a single new idea in the entire address, but he gave it and I am quite satisfied that he himself was convinced that what he presented was entirely new. It was not—you could read all of it in Stokes' book, published nearly 150 years ago. The lecture was useful and served a purpose, but the impression which he conveyed was entirely erroneous.

In view of the fact that the impression has grown that these elaborate instruments, which can be utilized only in sets and are expensive, are necessary, it seems to me that some of the older men like myself should arise occasionally and protest that they are not necessary, that only to a very small degree do they round out the diagnosis. They have their use as diagnostic aids, but essentially their great effect has been that they have taught us much of the physiology of the circulation which we did not know before, and it is possible that their continued use may in time increase materially our diagnostic resources. It also seems to me that this is an appropriate occasion to speak of these older methods and facts, because, as I understand it, this Society yesterday organized a Heart Association which I believe the founders plan to affiliate with the American Heart Association. It is a very useful movement. It is only within the last few years that the medical profession, and still less the general public, have realized how stupendously important the diseases of the heart and blood-vessels are becoming; that they are now reaching very close to the peak of our serious dangers; that as we go on through life the dangers of those things progressively become greater, and that much can be done in the way of protection by systematic effort. I fancy that while we may not be able to reduce the incidence in cardiac disease as has been done in tuberculosis, we nevertheless can accomplish much, and even though we may not be able to reduce its incidence we can prolong the life and increase the usefulness of the individual by instruction—instruction not only to the public, but to the physician. Therefore the work which these organizations are to accomplish is to be done not particularly by the men who are specially interested in cardiovascular disease, but by general practitioners. They are the men who are going to see these patients early in the disease and supervise the cases in their evolution.

Principal Heart Lesions

In the time which is proper for an occasion like this one can only touch on what he individually may select as the high points. And mainly the thing to which I wish to call your attention is this: That essentially there are three

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kinds of heart lesions we will meet. That by no means includes all, but the vast majority of them.

1. There is a disease of the heart which we see frequently in childhood, in youth, and in early manhood.

2. There is another type of heart disease, far more common than generally realized, that begins to appear at about thirty-five and the cases usually come to an end before fifty-five.

3. Then comes the condition of the heart and blood-vessels which, perhaps improperly but conveniently, we call the senile changes.

Valvular Lesions—I do not want to convey the idea that these lines of division are absolutely sharp. The processes which are predominant in childhood occasionally linger over into adult life, and are sometimes found in later years. But in a general way the child or young adult has a certain type of lesion, and those lesions are practically always due to endocardial changes. They practically all of them are valvular, and whenever a physician encounters a cardiac picture in the young, it would require much evidence to determine that anything else exists except a valvular lesion. While these conditions are spoken of as endocardial lesions, they are not primarily endocardial at all; they begin in the blood-vessels or in the valves, and the inference we draw from that is that the danger to a valve is proportionate to its vascular supply. The danger in the case of one with a larger number of vessels is greater. That accounts for the clinical fact that mitral lesions are the common ones, and only secondarily do we have involvements of the aortic valve. So in childhood the great bulk of the lesions you are going to see are mitral lesions, sometimes associated with aortic lesions, but almost never aortic only. The moment you see in a young individual a pure aortic lesion you are puzzled, because it does not fit, it is a rare thing. I have in my life perhaps seen a half dozen pure aortic lesions in the young, but they are very rare and cut no figure in our line of thought today.

As the child grows older the vascular supply of the various valves, mainly in the mitral and only slightly in the aortic, becomes less and less numerous. As the vascular supply decreases the dangers decrease, and that is in the child and young adult. While endocarditis may occur any time in life, it is rare except in early youth. There is only one exception to this rule, and that is that as the individual becomes old and the aortic valves begin to vascularize, then you meet the incidence of endocarditis, and you will find that in old people endocarditis begins in the aortic valve and if you have opportunity to make autopsy on such a case you will find that the endocarditis has begun in a little arterio sclerotic patch and spread from there.

In this early group of cases the problems of diagnosis are purely physical. It is not necessary for you to know the history of the individual, nothing at all about the subjective complaints; it is a purely physical problem. This is not true in later life, but in childhood the history and complaints are of no consequence. And that is one of the points I want to stress—that in the child and young adult the recognition of an endocarditis is a purely physical problem dependent entirely upon your skill in examination. In solving that physical problem there is one method of examination which exceeds all of the others in importance, and I am sorry to say that it is one which is not as confidently used as it should be; and that is the value of percussion—the outlining of the size and shape of the heart by percussion. Why it should not be used is, I think, easy to understand. It is because percussion is an art, an art only laboriously acquired. It takes years and years of practice to make an accurate cardiac percussion. The reason why determination of the shape and size of the heart is so important is because practically it cannot be simulated by any other thing. With lesions of the mitral valve the work of compensation falls upon the right heart, and we have in consequence an increase in size of the right heart. In aortic lesions the work of compensation falls upon the left heart and we have in consequence enlargement of the left heart. Such hypertrophy as that can be easily and definitely determined by you with nothing but your fingers, you need no instrumentation at all, and rarely will this method lead you wrong. You do not need the orthodiagraph or similar apparatus, although one would like to have these things as matters of record; but they are not necessary, the work can all be done with the fingers.

Next in importance come the alteration from the normal cardiac tones, their intensities, their rate, their replacement by other sounds. And if there is one thing upon which I wish to lay particular stress it is the use of your stethoscope. I am not at all sure, as I look back over my professional life, but that the stethoscope has been responsible for more harm than good. It certainly has led us into a great amount of erroneous diagnosis. All of you recall the not too creditable record which we made during the draft period, when hundred of thousands of young men were told that they had heart lesions. Why? Because someone listened to the heart and heard an impurity of the first tone. Let me say that

impurities of the first tone are of no consequence whatever. You will hear systolic murmurs over the heart in every individual at some time. They are to be utterly and absolutely disregarded in the question of recognizing an endocarditis unless backed up by other signs and symptoms, but in themselves alone they have no significance whatever. Furthermore, it does not make any difference what the character of the murmur is, whether harsh or soft, whether rough or smooth, whether faint or loud, whether you hear it over the apex or the base, whether confined to the cardiac area or transmitted all over the chest, they have no significance whatsoever. And if every one of you who has gone through life with the idea that they are of significance will forget it, I shall feel that I have accomplished much. Place no reliance upon them whatever. Diastolic murmurs are another thing and must always be seriously regarded. However, as I look back over the cases I have seen I can recall a few instances where diastolic murmurs occurred over hearts which at the autopsy table were found to be nothing at all. I have heard a few diastolic murmurs which developed over the base of the heart because of dilatation of the aorta, but they are so exceptional that one need pay but little attention to them.

There is one group of cases in which you are particularly tempted to make a diagnosis of heart lesion, and in which such a diagnosis is distinctly harmful to the patient. We saw a good many of them during the war period that were called by various names, as neurocirculatory asthenias, but the name I have used to describe these people is that they are constitutionally inferior, by which I mean that they are inferior individuals physically, mentally, morally, but why they are I do not know. They are not normal individuals, and when I say constitutionally inferior I mean that they are inferior for reasons we do not know. Those individuals come in frequently and tell you a story like this: They tire easily, they get out of breath, they have palpitation, they have pain over the chest particularly over the left side, their hands are cold or are sweaty, they faint away. Their thought is solely on their heart. Listen over the heart of that individual and you are almost certain to hear a systolic murmur, but if you percuss the heart you find that it is normal in shape and size; not normal in rhythm, but it is a normal heart in an abnormal individual. If such an individual as that is told that he has a heart lesion, you and I and all the rest of us can never get that out; he goes through life with the conviction that he has something wrong with his heart and that he will drop dead. Therefore in the case of such individuals be careful not to make a diagnosis of heart lesion. It is infinitely better that you should occasionally fail to recognize a heart lesion than to say to one young individual that he has a heart lesion when he hasn't. If you do that and in six months find that his heart is not sound, you have merely made an error; but if you tell these constitutionally inferior individuals that they have a heart lesion you handicap them, and they are already sufficiently handicapped without giving them the thought that they have a heart lesion.

Now, there are some exceptions of very great importance. There are certain diseases in which endocarditis occurs so frequently that you should assume always that an endocarditis exists. For example, following acute articular rheumatism in the child. It is possible for such a child as that to recover without an endocarditis, but endocarditis develops in such a high percentage of those cases that you should always say that the child probably has an endocarditis, and if he hasn't we see to it that no harm comes to him. The same thing is true of chorea. I now have in the hospital a girl of fourteen who came in ten days ago with violent chorea which came on after a rather slight attack of rheumatism. She has over the apex a systolic murmur. She has no alteration in the tones, no enlargement, no alteration in the pulse. Has she an endocarditis? I do not know, but of this much I am sure: That I shall take the same care of her as though I knew she had an endocarditis, which means that she shall have a prolonged rest in bed, because if she has endocarditis which I later become certain of, then I have done the best thing. Six months later this girl showed all the physical signs of a mitral insufficiency. And I cannot too strongly urge you to keep these children with rheumatism and chorea in bed, not for days, not for weeks, but for months. I know personally that if one of my grandchildren had such a case, he should be in bed for a year at least, because if he has an endocarditis the more quiet he has had in bed the less the future deformity and the more perfectly the individual will go through life. Furthermore, not infrequently you will have the agreeable experience of having all the evidences of endocarditis disappear under prolonged rest and see those individuals grow up to adult life showing no signs of cardiac lesion.

In the last ten or twelve years we have come to realize that re-infection of the endocardium takes place much more often than we formerly thought, that without doubt these valves which have been diseased are more vascular than they

otherwise would be, and this vascularity renders them liable to reinfection. I have come to this point: If a patient comes into the hospital with the ordinary picture of a break in compensation, and that compensation is not promptly reestablished with rest in bed usually with digitalis, then I am sure the endocardium is reinfected. Now, it is sometimes difficult to demonstrate that an infection exists, but usually by frequent taking of the rectal temperature and frequent blood culture you will demonstrate the reinfection.

Not long ago we had a woman in the house for three months with an old endocardial lesion and break in compensation and that break did not disappear under rest. The presumption arose that she had a reinfection. I do not know how many leucocyte counts we made, we never could prove anything, but we did not give up the idea that she had a reinfection. At the autopsy table it was demonstrated that she had an infection of an old endocarditis. That has been an important addition to our knowledge, because in my earlier work that idea did not occur to me. We had no conception of the frequency with which those reinfections occurred and the difficulty of detecting the infection, and yet with care and attention to those three items in the great majority of cases you will be able to demonstrate that reinfection has occurred.

There is one other factor to which I wish to call attention, and that is the fact that an individual with valvular heart lesion does not necessarily mean that he is no good. It means their care, their protection, more or less repeated supervision, but it is quite possible for such an individual to go on for many, many years. For example, the other day I saw a man of seventy-five who had a double mitral lesion which he acquired when he was young, and for fifty-five years he had carried the heart lesion, but it was not the old valvular lesion at all, which was causing his present trouble but a myocarditis causing a heart bloc.

Aortic Syphilis—These cases begin to turn up at about the age of thirty-five and you will see them as late as fifty-five. In this group the history and the story of the patient's complaints are matters of great importance, whereas with the endocardial lesions we need pay no attention to them. But with this second group you must pay attention. The story will be like this: That some fifteen or twenty years before they had had a chancre which was treated adequately or inadequately, as they are. He had gone along with his activities free from syphilitic manifestations perhaps, or with only trivial manifestations, but in general good health. However, in the last few months he has noticed that he tired more easily, that he got out of breath more quickly, that every once in a while he would have a feeling of discomfort, not pain; he has paid no attention to it, thought his stomach was out of order, when suddenly in the middle of the night he wakes up out of breath, cannot get his breath, and for fifteen minutes or half an hour or sometimes two or three hours he struggles for his breath. The next morning he is all right, goes on about his business and does not think much about it. He will then go on for a few days, a few weeks, or perhaps a few months, when he will have another similar spell; or he may have a spell coming on in the daytime. And finally, the attacks becoming more frequent, he comes to see you and narrates his symptoms. You look him over, you hear the story of a syphilis occurring fifteen or twenty years before, and then these phenomena of attacks of dyspnœa from exertion, attacks of pain in the cardiac region radiating to the shoulder, which are perfectly typical and in all grades, attacks of angina pectoris. But he is only thirty-five or forty - too young. You examine him and find absolutely nothing.

Two or three months ago a doctor came into the office with just that kind of a story exactly—the story I have told you might be his story. Physical examination absolutely negative. We could percuss out nothing, could hear nothing. The orthodiagrams were normal, the electrocardiograms were normal, and yet there is little doubt but that he has syphilis of the aorta. Now, as a rule you are not troubled in that way. Usually when they come in you will find that they have a considerable degree of cardiac hypertrophy of the left ventricle; that in many cases, not all, they have an aortic insufficiency, perfectly typical, but unaccompanied by any change in the mitral valve or orifice. No matter what the station in life an individual may occupy, if at thirty-five or forty he comes in with pure aortic insufficiency, that person is syphilitic, with one possible exception to which I will refer in a moment. In many of these individuals you are able to demonstrate by percussion that the aorta is enlarged, in many you will be able to demonstrate that not only is the aorta enlarged, but actually sacculated; that is, aneurysm is present, together with usually an aortic insufficiency. Upon examining the individual, as a rule you will nearly always find some syphilitic stigmata elsewhere—general paresis, gumma somewhere, possibly a syphilitic liver, something of that sort.

Now, in that diagnosis you utilize in part the results of your physical examination, but do not neglect the fact that in this group of cases the

history and subjective feelings of the individual are matters of importance to the end that you may recognize aortic syphilis. The moment you make a diagnosis of an aortic syphilis you offer that individual a prognosis of sudden death, because a large percentage of them die suddenly—drop dead on the street, found dead in bed in the morning; but rarely are they younger than thirty-five, rarely older than forty-five. Usually it is about fifteen years between chancre and the development of aortic syphilis. Six years is the shortest period I have ever seen except once or twice, a phenomenon which led me to believe that we had not tertiary manifestations in the aorta, but secondary. In most of the cases in which aortic syphilis develops so early it is because those individuals have had too much mercury and arsenic. Therefore do not give that individual arsenic, do not give him mercury, except in small amounts. If you attempt to treat him as vigorously as you would, then watch out, you are going to learn something and at somebody's expense. That is the way I learned it.

I stated that if at thirty-five or forty the individual comes in with pure aortic insufficiency, he is syphilitic, with one possible exception. A few times, not many, since the last influenza epidemic I have seen people who told me exactly the story I have related to you as characteristic of aortic syphilis—the physical findings, the evolution, the end, exactly that of an aortic syphilis; and yet the incidence of the phenomena was so closely associated with the influenzal infection that I am of the opinion that these were cases of influenzal rather than syphilitic aortitis. The proof of this I have not been able to secure because I have never had an autopsy on those patients who died from the influenza.

Myocardial Changes—There is a group of cases in which we all have a personal interest, and those are the myocardial changes that come about later in life. At fifty-five, sixty, seventy-five, individuals begin to deteriorate. They may come to you with nothing at all in their story which would suggest that they have anything wrong with the heart. Their story is something like this: "I have had a cold which has lasted for the last two or three months, I had one like it last winter and one like it the winter before, then during the summer time I am all right." No complaint at all except recurring winter colds should always suggest to us the possibility of there being a mild degeneration going on. They will come to you complaining that while they have not any particular gastric disturbance, nevertheless their digestion is not what it used to be, they have to be careful about what they eat. Or they will complain about getting out of breath. A little exertion which formerly they were able to make without any discomfort begins to tire them. For instance, they do not like to go up and down stairs. Or they will come complaining of a feeling of weight or fullness. A very distinguished medical man in Chicago came in the other day and said, "I do not know whether anything is the matter with me or not, but I have noticed for two or three weeks these things: I leave the house at eight o'clock in the morning, drive down town and leave the car in Grant Park, start to walk to my office and that is all right; but when I go up a little grade of about ten feet, then I begin to get weight here (indicating cardiac region) and I have to stop". There is no doubt about it. The exertion, particularly the exertion on the rise, is causing mild attacks of angina pectoris. How long will it go before he gets a bad attack? I do not know. If he would cut out these exertions, these walks up grade, this might bring about prompt disappearance of the attacks.

Just as in the young you pay no attention to what they tell you because you can rely for your diagnosis on what you find, in the old people do not rely on what you find, but what they tell you. Lay great stress on the history, and if after getting the history you have any doubt as to whether or not myocardial changes are taking place, you may be reasonably certain that they are there—absolutely opposite the case of the child or young adult unless you can demonstrate that the heart lesion is present. Therefore in the older people, drunk or sober, smoker or not a smoker, if you have any suspicion it is there, it is there. Then of course in addition to that you will see any quantity of cases in which the phenomena are much more definitely marked, where you will see the excruciating attacks of angina or of edema or of pulmonary asthma or the symptoms of break in compensation. So there is no doubt of the condition. But it is in the cases of men who come with a trivial complaint that it is important to recognize the condition, because in that period, while you cannot cure them, you can nevertheless very materially prolong the patient's life and very markedly increase his comfort.

Resume

In those three groups, the endocardial cases, the syphilitic cases, and those which I call myocardial cases, will be included at least 95 per cent of all the cardiac cases you are going to see. Occasionally cases will come to you that do not fit that description. You will sometimes see a child after influenza with a mild endocarditis,

not often. But the vast majority of the cases that you are going to see and care for will come within those three groups, and in all of them the diagnosis is relatively simple: In the first group, physical evidence only; in the second, the story plus the symptoms, and in the third group we rely upon the patient's story rather than upon the results of physical examination.

GENERAL PRACTICE AND ITS RELATION TO PREVENTIVE MEDICINE*

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Dubuque

The practice of medicine is almost as old as man himself. Preventive medicine, while of quite recent origin, is making rapid strides, and even now has advanced to the stage where it is considered a specialty. The liberal endowing of public health schools as Johns Hopkins and Harvard by the Rockefeller Foundation, indicates that preventive medicine is on a firm basis.

A distinction should be made between public health and preventive medicine, since this paper deals principally with the latter.

Public health as it is to be regarded here, deals rather with the administrative aspect of preventive medicine. However I wish to take up the preventive side, especially as it is concerned with general practice.

Preventive medicine is part and parcel of the general practice of medicine and yet is sadly neglected. Preventive medicine is neither new nor strange among the general medical sciences, it is merely a change in the placing of the emphasis in medical education, which endeavors to call the physician's attention to the preventable aspects of disease.

Dr. Haven Emerson states recently that, "Anatomy, physiology and biochemistry offer at every point opportunities to learn the range of variation in the normal body and its functions. The subject of sanitation or environment as it affects human life is in a large part properly presented through physiology and anatomy". Pediatrics and obstetrics might almost be considered primarily from the point of view of preventive medicine. Maternity, childhood, growth, reproduction, are the legitimate field of the most nearly ideal theory and practice of preventive medicine.

On analysis it is seen that the blame should be placed on the training of the average physician. In practically every medical school, emphasis is placed on disease; therefore, the physician thinks in terms of pathology rather than physiology or the normal functioning of the organism.

To qualify as a public health administrator, special training is a necessity. To practice preventive medicine, the main requisite is a general medical training, plus a preventive medical viewpoint.

In order that the general practitioner makes progress along lines of preventive medicine, he must recognize deviations from normal long before the patient actually suffers any marked inconvenience or pain.

Our recent experience in drafting recruits during the World War and their subsequent rejection on account of physical and mental defects, is an object lesson to the medical profession at large. A large percentage of these defects could have been remedied during childhood, especially during the pre-school age. The medical directors of large industrial corporations are having precisely the same experience, and they freely admit that more stress should be placed on child hygiene.

In the earlier days of preventive medicine the logical point to approach the problem of child hygiene was apparently by removing the defects of the school child. More recently it appears that the pre-school age is the important period. But on further analysis, it is shown the proper time to start on the hygiene of the child is at the time of conception and even before. With this idea in view, authorities now state that the child should be under medical supervision from the time of conception to adolescence. The establishment of pre-natal, post-natal, well baby, and pre-school clinics in many cities is mute evidence of the general interest in this subject.

The number of readers of syndicated health articles is increasing constantly, and these articles deal almost exclusively with diseases of a preventable nature. This increase in public interest is an index to the popularity of preventive medicine. The general practitioner must keep abreast of the times and practice preventive medicine together with his other curative and palliative measures, if he desires to hold the faith and confidence of his clientele.

The establishment of county health units under the direction of full-time public health officers, will in a few years, popularize preventive medicine to such an extent, that the physician in general practice must of necessity include prevention along with his other measures. Iowa at present has no law whereby a county health unit may be legally established. According to the statutes, the township is the health unit, and this unit is

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under the direction of the township trustees, who in turn comprise the board of health. Obviously such a unit as concerns public health and preventive medicine is as antiquated as the tallow dip.

I am of the opinion that the next session of the state legislature will be productive of enabling legislation, whereby the county boards of supervisors may establish a county health department with a full-time physician in charge. When such a change occurs, preventive medicine will have made a marked advance in this state.

While we as general practitioners can at this time relegate preventive medicine to the background, the time is not far distant when we must place considerable emphasis on this important subject. And if we, as a medical profession are to maintain our supremacy and supervision in medical matters, then it is necessary that we change our present viewpoint.

Sheppard-Towner clinics have been held in ninety-seven of the ninety-nine counties of the state. From a public health viewpoint, these clinics are well worth while and are productive of results, since they stimulate parents to have their children examined. In this way many defects are discovered and the child is referred to their family physician for treatment. The average general physician resents state and federal clinics, for he regards them as an intrusion on his private practice.

I believe that the establishment of county health departments cooperating with the local medical societies, will accomplish considerable towards preventing the necessity of state or federal clinics.

A large number of physicians in Iowa are not in full sympathy with preventive medicine in general and public health in particular. The reason for this condition is because the medical men have no voice in the control of the public health activities which are being carried on in many communities. Many towns and cities have had school nurses for years and numerous counties now have rural nursing service. In fact the majority of public health done thus far in the state, has been carried on by these various agencies, without the supervision of the medical profession. The work done is deserving of credit, because it largely comprises direct contact in the homes. In many instances, the medical profession and these agencies worked at cross purposes and neither could or would understand the others viewpoint.

As stated before, the State Medical Society as well as its component county societies, have no methods or means by which the public health activities may be controlled. This explains the lack of cooperation and even opposition on the part of some of the medical profession. And their grievances are not without foundation.

In other states, they have full control and rightly so—even selecting their own health officers. The county medical society should have the choice of a properly qualified health officer. Thus public health policies of the community will be placed under direct control of the medical society. In Alabama, the state society advises and cooperates with the state board of health, and the county medical society make up the county boards of health. Thus in each county all public health activities are headed by the county health officer, who in turn is an agent of the local medical society. The medical profession being responsible for all public health work in any community, is hardly in a position to oppose this work and cooperation is the logical result.

If Iowa's county medical societies and future county health departments can supplant the Sheppard-Towner clinics and produce more efficient results, these clinics will automatically cease. These traveling clinics are weak in that their beneficial effects are minimized, because their efforts are more or less spasmodic. I do not wish to be understood as opposing the good work that these clinics are doing, but I do desire to point out to the average physician that the remedy is in our own hands. The success of real public health and preventive medicine is absolutely dependent on constant and sustained effort. It is only through the offices of the local medical societies that constant and continued effort can be put forth in public health and preventive medicine.

To bring all health activities under one head, county health units must be organized for they furnish the necessary medical administration. If enabling legislation is forthcoming, then preventive medicine will go forward and the general medical profession will not only gain new honor and glory but will also profit financially.

The medical profession need not, however, wait for legislation, but can practice preventive medicine in many ways.

The first fundamental of preventive medicine is health education. As a state society, we might well follow the plan which Illinois has adopted. Their house of delegates authorized the inauguration of some plan for health education for laymen. A lay education committee was appointed and as a result of their work, other health organizations offered their full cooperation and expressed their willingness to work under the supervision of the county medical societies. In connection with this work Dr. H. M. Camp, secretary

of the Illinois State Medical Society, states, "We believe that there is bound to be a better feeling in the profession, and a closer cooperation with the many organizations which previously undertook work of this sort on their own responsibility, so that in the future, in Illinois, all health activities will be conducted and sponsored as they should be, under medical supervision".

The field of preventive medicine as it concerns the general practice of medicine is broad, and the amount of work that the physician can accomplish is endless. In short the physician must constitute himself the family health adviser, for this will be one of the main functions of the practitioner within the next generation.

I now wish to take up briefly, a few methods of practicing preventive medicine. These methods of prevention, while not new, are certainly deserving of attention on the part of every general practitioner.

RICKETS

Rickets is a chronic nutritional disorder, the responsible factors being diet and hygiene. The diet is deficient in fat soluble vitamines and the faulty hygiene is due to lack of the ultra violet rays of sunlight. Therefore this disease has a distinct seasonal prevalence. While artificially fed children are more susceptible to the disease, yet a large number of breast fed babies will develop rickets.

Cod liver oil is not only a specific cure but also a preventive.

This method of preventing rickets should be made known to the mother before the baby is two months of age, so that she can give prophylactic doses after this period. The routine administration of cod liver oil after the second month, especially from October to April, will prevent the many cases of rickets which physicians so commonly see during the spring months. The majority of these cases have been kept closely housed all winter.

The necessary advice can be given to the mother in a few minutes, preferably during one of the post-natal calls. The physician should also urge that the child be examined at least once a month, to check up the general health, diet and weight. Many mothers do not realize the possible benefits of these monthly examinations of the baby, in fact they will not call the physician until the baby is ill. The opportune time then to give a word of advice concerning the prophylaxis of rickets, is early.

Rickets can be largely controlled through educational measures, the information coming preferably from the family physician.

DIPHTHERIA

Although the toxin-antitoxin treatment for immunization against diphtheria is well known to the profession, yet a small number of children in this state are protected.

Since it has not been possible to institute any campaigns generally over the state, every medical society should seriously consider the question of bringing this matter before the people of their community. Every family physician could do much towards popularizing diphtheria immunization. Unless the parents are advised as to the possible benefits to be derived, their children will remain unimmunized. The advice of the family physician is law in many families. Therefore if he would only urge that the susceptible child be protected, many would follow his advice.

At present, the immunization of children is largely a proposition for the private practitioners.

Possibly the technique of the Schick test and the reading of it, may deter some who have not had any experience. However, it is feasible to omit the Schick test in all children under the age of five and proceed with the immunization. Three hypodermic injections of toxin-antitoxin mixture a week apart, is a very simple matter, yet the results are far-reaching and of tremendous value both to the individual and the community.

If every physician made it a routine to immunize each baby under his care at the age of one year, the child population would be immune to diphtheria in a comparatively short time and diphtheria would no longer be a problem. This appears simple no doubt, but the procrastination of the layman as well as the physician must be considered.

Unless the medical profession arouses itself in the matter of diphtheria prevention, diphtheria will continue to take its toll. Quarantine and isolation are but a makeshift. An immune population is the only solution.

Many other diseases and conditions of a preventable nature will suggest themselves to the general practitioner. Among these may be mentioned; small-pox, typhoid and paratyphoid, dysentery, rabies, venereal disease, blindness, tetanus, tuberculosis, scarlet fever, whooping cough, lobar pneumonia, common colds, cerebrospinal fever, goitre, malaria, mental disease, heart disease, maternal deaths and infant mortality in general.

CONCLUSIONS

1. Enabling legislation should be provided for the establishment of county health units.

2. All health activities should be under the supervision of the state and county medical societies.

3. Rickets is preventable. Cod liver oil should be given to practically all children over two months of age, especially from October to April.

4. All children should be immunized against diphtheria at one year of age. Diphtheria can gain no foothold in an immune population.

PUBLIC HEALTH IN RURAL COMMUNITIES*

J. H. Chittum, M.D., Wapello

This is not intended for a well rounded out treatise on public health service; but some personal observations based on practical experience.

The greatest obstacle in the way of preventive medicine is the lack of cooperation on the part of the people most to be benefited. This varying all the way from stupid indifference due to ignorance, to active opposition and obstruction on account of still more stupid prejudice.

Typhoid fever is still taking a heavier toll than it should be allowed to do. There is too little attention paid by country people, to pure milk, pure water, the proper disposal of sewage and barn yard litter; and more particularly to immunization by typhoid vaccine.

There is no disease in the whole catalog for which science has done her part so thoroughly as smallpox. And yet statistics tell us that the death list from this loathsome and yet entirely preventable disease is increasing steadily year after year.

It is not so strange that ignorant people neglect and prejudiced ones strongly oppose, so simple and harmless a procedure as vaccination. But we have a right to expect various officials to assist, rather than oppose our efforts. It is easy to have a whole community protected against this disease when school boards will cooperate with physicians. It is almost impossible when they do not.

Boards of health may exert themselves to the utmost; enforcing all the regulations known for quarantine, disinfection, and all the rest of it; and smallpox continue to spread. But let school boards wake up and realize that they have a responsibility to shoulder. Convince them that vaccination is a pure preventive, and not "a graft for the doctors"; induce them to pass the word to their teachers that vaccination must be enforced. Then smallpox will vanish away like the mist of the morning before the full blaze of the morning sun.

It is only within the last few years that we have had other means of preventing the spread of scarlet fever, except isolation and disinfection. Now we are hoping that the research work of the Doctors Dick of Chicago will prove as great a boon to humanity as the discovery of Jenner more than a century ago. The experience of those who have been trying out the Dick test for susceptibility, and the immunization of reactors; gives great encouragement. It looks as though not many years may elapse ere scarlet fever will be placed in the list with smallpox; that it will be considered a disgrace to contract, because of the ease with which it may be prevented. However as yet, we in rural communities have not had the advantage of having the Doctors Dick in our midst, like Chicago. Nor like Gary, Indiana, have them visit us to make personal tests. Nor like Gary, of having the constant presence and service of Dr. Nesbit, one of their students.

Insofar as there may be some question of diagnosis in mild forms of scarlet fever, it is very important that the community be given the benefit of the doubt. However, I am sure that most cases of scarlet fever are transmitted by those never seen by a physician, and consequently no isolation nor disinfection been followed. The worst case of scarlet fever I ever saw that did not result fatally, was traced to a child that had not been seen by a physician, as the parents had considered it a trivial rash.

As a class it is easier to impress upon teachers than parents, that no rash is trivial, and that all such should be examined by a physician. Just to the extent that this fact can be made to prevail, shall scarlet fever be prevented from spreading. I do not dwell upon the state board of health regulations. They are well known and well enforced, in the main; except for the cases just mentioned.

There can be no doubt that diphtheria has been increasing in recent years; both in incidence and virulence. More fatal cases have occurred, and more sequellæ have been observed. This in spite of the improved methods of treatment and for control that have been evolved during the last thirty years. Since we have learned to give antitoxin in doses up to 50,000 units, it would seem that all diphtheria patients should recover. Still we lose some of those children. With the Schick test to search out susceptibles, and toxin-antitoxin to immunize them; there should be no more diphtheria. Yet the essayist saw more cases of this disease in a single day, and for many days in succession in 1923 and 1924, than during the whole of twenty-five years previously.

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Country people are very slow to take advantage of the Schick system. Only a very small per cent of them have been willing to have their children tested and treated. But when we observe how negligent people are of preventive measures that have been so thoroughly proven as vaccination for smallpox; it is not any wonder that they are slow to try out these later measures that are still on trial. In the experience of the essayist some have developed diphtheria months after being treated with toxin-antitoxin, and some have had it after repeated negative Schick test.

Our community has but recently emerged from a two year fight against diphtheria, and perhaps a few experiences therefrom might be of interest. As the records in the country are not at all complete; the nearest we can arrive at figures are as follows. Twenty per cent of those having negative Schick test, developed diphtheria within a year. About 20 per cent of those receiving toxin-antitoxin, had it within the period between six and eighteen months afterward. In one family of three children aged four, eight and ten, the older two were Schick negative and the youngest received toxin-antitoxin. One year later all three were Schick negative. Within a week from the test, the second child was down with the disease. The others remained well.

In one family where there were a large number of small children, one contracted diphtheria. The child objected to the needle puncture, and the parents would not insist on it accepting the antitoxin. Nor would they have the other children immunized. The sick one promptly recovered, became germ free in record time and none of the others developed the disease.

A girl of eight years, only child in the family, objected to antitoxin, and the parents took sides with the child. She had a very slow recovery, and was under quarantine for three months before she became germ free. One and one-half years later she developed suppuration of both middle ears, and has been in hospital quite a while for treatment, which has included opening both mastoids. I do not know when she is going to get home.

One mother kept her little girl out of school for fear she might be exposed to diphtheria, but the child went into the next yard and played with the neighbor little girl that was quarantined on account of having been found to be a carrier. The other child became ill while the carrier remained well and very active all the time. By the way, hundreds of cultures were taken in the schools including pupils and teachers; and quite a number of carriers found and isolated. In some cases the child showing a positive culture would be down sick by the time the report was received from the laboratory. But in most cases none of the carriers so found became ill at all.

In a number of instances where part of a family had diphtheria and the others were immunized by antitoxin, some others would develop the disease a few weeks later after their protection had worn off. This suggests a peculiar problem, whether when part of a family contracts diphtheria, to give the others antitoxin, or to wait and see whether the others take it or not. Here the Schick test is not practicable because of lack of time. There is no use in giving toxin-antitoxin because it requires some months to develop immunity. It is antitoxin or wait. We must decide each case on its own merits, taking into consideration all the circumstances. The attitude of the parents is an important factor. Also the question of the possibility of sensitization and future anaphylaxis. A little serum sickness may be passed by, but a real attack of anaphylactic shock is something not to be ignored.

In one country school there were twenty pupils. Seventeen had diphtheria, one was shown to be a healthy carrier, and the other two and the teacher were given antitoxin. On account of some of the patients being slow to become germ free, quarantine was very much prolonged, and the work of the school much retarded. With the cooperation of the local board of health, the directors, and the teacher, school was reopened under quarantine and was carried on two weeks before quarantine could be released.

A few words about closing schools during the prevalence of any kind of epidemic. I want to endorse most emphatically the stand taken in the advice from the state board of health. We had a number of experiences proving its wisdom, besides the one related of the little girl kept out by her mother. Even in the absence of a school nurse, the situation can be controlled more satisfactorily by having school continue. Teachers will keep a closer watch over children than average parents. During the epidemic through which we recently passed, much credit for controlling the spread of the disease was due to the eternal vigilance of the teachers. If a child showed the least sign of illness of any nature, it was sent to a physician for a diagnosis. If the condition was found to warrant sending the child home, this was done. In more than half the instances, the child did need to be sent from school. Also if a child was absent for any reason an explanation was required, and if the absence was due to illness, it had to be shown that the trouble was not of a contagious nature, or that the stage of infectiveness had passed and that cleaning up had

been done. In this manner many infectious throats were kept out of school where children had been having a mild infection and no physician had been in attendance.

Allow me to say a few words about that awful bugbear, "Quarantine". The quarantine laws were enacted to restrain those who are so consumately selfish that they are unwilling to suffer a slight inconvenience rather than expose your child and mine to the danger of contracting a loathsome and dangerous disease. Quarantine is nothing more than a practical application of the golden rule; and yet physicians make more enemies and more bitter enemies by having occasion to report cases of contagious disease for quarantine than any other thing. I do not even except the effort to collect bills due and over due.

You may make an error in diagnosis, and lose a patient with appendicitis, and they may forgive you. You may neglect an obstetric case and have a disastrous result, and they may overlook the matter. Even you may have a bad result in treating a fracture, and they may not sue you for malpractice. But if you have need to report "some people" for quarantine, look out for bitter feeling. I say "some people", for thank heaven, there are some others. There are people who are intelligent enough, and unselfish enough that they are willing to make any sacrifice to safeguard their neighbors during their own time of misfortune. The quarantine is the least of their troubles and they know it.

Some of the selfish kind will take the greatest risks and endanger the lives of their children in order to avoid quarantine. In one case a mother waited five days before calling a physician to her little girl suffering from laryngeal diphtheria. When seen she was almost moribund and died in a few hours in spite of 10,000 units of antitoxin every three hours, and a tracheotomy. Of course she died. Then the mother reproached herself bitterly for her neglect. I could not offer her any consolation, for I felt that she had murdered her child.

In addition to the effort to control the spread of specific communicable diseases; the task of securing sanitary surroundings is quite a factor in safeguarding the health of all communities. Henry Ford must be given credit for helping eradicate manure piles that formerly served as breeding places for flies and other pests that were such a factor in carrying disease of all kinds. This as well as to be blamed for the scarcity of money in the country, and the consequent low percentage of collections, which works such a hardship to the country doctors.

Still there are too many piles of barnyard litter and other filth; too many stagnant pools of water, and too much dirt inside the houses. Also too little use of soap and hot water, and too little fresh air and sunshine. It seems strange that people will spend money putting windows in their houses and then spend a lot more money covering those windows with shades and blinds to keep God's sunshine out.

Perhaps the most neglected point in sanitation in the country is the water supply. Commonly any water that looks clear and does not taste nor smell nasty, is considered fit for household use. No matter if the dug well is within a few feet of the barn and pig sty, and the cover loose enough to admit anything smaller than the barnyard live stock; no thought of contamination enters. Why should these things be when it is reasonably easy to have all water supply tested, and it is not such a great engineering problem to secure dependable water in any part of Iowa?

What are the means of overcoming the difficulties in the way of ideal public health conditions? Education. By personal contact with patients and their families, physicians may accomplish something. But more can be done through the public schools. Most teachers are willing and eager to cooperate to the extent of their time and equipment.

Some counties have employed public health nurses who have brought about splendid results. In other counties, among which we must confess is ours, it is considered more important to maintain a farm bureau organization to employ a county expert, to be consulted in case of swine disease, to tell the farmers when to send for a veterinary surgeon. But even in these counties school teachers may be depended on to teach the elements of health, as well as the three R's.

Yes, and there are several organizations that are doing a noble work in helping this cause along. The national and state tuberculosis associations should have branches in every county. Our branch is called a public health association, since the regulations of the state organization permits us to use our share of the funds for any form of public health work. This fund derived from the sale of Christmas seals, has accomplished a surprising amount of good. Tuberculosis and child welfare clinics have been held. A sanitary survey of all the schools in the county has been conducted. Public posters and literature have been distributed. Ot our county fair a public health tent has been provided each year, with shows and other educational stunts and other devices to catch the attention of those who need to be taught the value of the care of health. The work part has been done by the public health

department of the W. C. T. U. and the cost paid by the public health association. Our red cross chapter is not functioning.

Also each school in the county receives the "Hygiea" each month and most of them have a text-book, "Teaching Health in Public Schools", for the use of teachers and pupils. All this from the little one cent seal of which we receive one-half. Of course the country doctors boost the Christmas seals. They recognize it as one of their best friends.

Isolation, disinfection, immunization, education—and the greatest of these is education, for upon it rests the effectiveness of the others.

Isolation helps some but is ineffective for many reasons, chief of which is the fact that so many contagious diseases are not seen by a physician.

Disinfection helps more when well done, because the general cleaning up secures a better sanitary condition in general.

Immunization is of greater benefit because it protects from the unknown as well as the known exposures.

But the more the public is educated along this line, the more the others will be carried out, the more effective they will become, and the less they will be needed.

Appendix—It would be a great help in rural communities where we depend on the state board of health laboratory if more prompt reports could be secured from specimens sent in. To have the laboratory working only eight hours a day and Saturday afternoon and Sunday off, leaves too long a gap. Pathogenic bacteria and country doctors are on duty twenty-four hours a day and seven days a week.

Discussion on Papers of Drs. Connell and Chittum

Dr. Daniel C. Steelsmith, Dubuque—The same experience in rural work as that set forth by Dr. Chittum led me to take up full time public health endeavors. Ignorance and carelessness must be overcome by education and care, in order to solve the present problem. The township unit with its present personnel is generally incapable; school boards are not more competent, county Red Cross and other societies are groping quite aimlessly about (doing much good occasionally), the state board of health cannot reach the 1,600 local boards of health effectively and direct all organizations any more than one laboratory can reach and give effective service to all parts of the state. I am sure no group of citizens of our great state are more capable or competent to guide work of this nature than are the men in this audience. The health unit seemingly adopted by other states as most workable and effective is the county unit. This fact has been recognized by many of our state organizations in Iowa. The few counties in Iowa employing school nurses are no doubt being awakened to the possibilities of public health work. The legislature of the state of Illinois has adopted legislation enabling counties to engage in public health work. Iowa is in need of this enabling legislation and a few cities and counties have proceeded without it. The medical profession should lead and guide this movement, and no better step could be made than for this session of the State Medical Society to adopt resolutions taking the matter in hand to follow to its completion. A full time county health official would solve most of the very disagreeable problems that have been so splendidly narrated in Dr. Chittum's paper. The expense of same would be but little more than is used in the now almost useless system. But what if it were more? Results would be sufficient to warrant the expenditure. I desire to congratulate Dr. Chittum upon his paper, and can fully sense his psychology as he penned it. His appendix surely contains the necessary "wallop" to bring all interested medical men to full attention and awaken them to their responsibilities. With such a splendid laboratory maintained at our university, with so many competent bacteriologists as we have within our state, with plenty of horses on our thousand hills to furnish serum, why not make and furnish free vaccines and antitoxins to all our people? (Oh, yes, I forgot the supply of calves—there will be enough bulls shot at any session of this meeting to father an abundance of calves for small-pox vaccine). Leaving the efficient laboratory at the university for teaching purposes and to serve the southeastern part of the state, and establishing three or four branch laboratories at points available to all parts of the state. You can sense that the above idea is not set forth with any intent to detract from the very efficient state laboratory, but to add to its effectiveness and usefulness.

Dr. H. T. Haerem, Story City—I certainly agree with what has been said, about the present situation as regards health officers in the small towns as deplorable; and any effort to make preventive medicine more efficient has my full sympathy. However, something can be accomplished even as we have it, and if we do not get anything better we will have to do the best we can. I desire to call your attention to the value of safeguarding the milk supply in the smaller cities. So far as most milk borne diseases are concerned, there is not, of course, nearly as much danger in the smaller communities, as in the large centers of population; for we in the small towns get the milk practically without the factor of transportation entering into the problem. But in the smaller cities there is in one respect more danger from the milk supply than in the large cities. I refer to the possibility of contraction of bovine tuberculosis. For in the smaller communities it is very rare that the milk used for drinking purposes is pasteurized. I believe it is true that many of the smaller cities have no ordinance for tuberculin test of their dairy herds. The town from which I come is one, that comparatively early tackled this problem, and perhaps a report of the work done there will be of some

interest as bearing on the subject of public health. In 1913 the Tuberculosis Association set aside a Sunday for health propaganda. Following the regular services in the various churches, different doctors would give a short lecture on tuberculosis. This aroused interest, and the health officer prevailed on the council to enact a milk ordinance requiring the testing of cows whose milk was sold in town. To allay opposition it was decided that the town should pay for the testing. I think about seventy cows were tested, three reacted and were condemned. Thus something had been accomplished, but we did not get a regular test. About five years later the health officer insisted that the ordinance of testing the cows be enforced, and the next year we secured a new test. But some of the councilmen remembered the cost of the first test, would not stand for that and had the ordinance amended, requiring the producers to pay for the test. As there were many who wished to sell milk at the time, the testing was done without any trouble. I regret to report that the next year it was not done. At the time there were not so many offering milk for sale and we had very hard times. About three years ago the health officer again insisted that the provision be enforced and with the assistance of the veterinary we improved the working of the ordinance, so the cows now are tested every year and no addition is made to the dairy herds except of the cows, recently tested for tuberculosis. The point I wish to emphasize is, that this work cannot be carried out by simply getting an ordinance passed. The follow-up work is just as important, but much easier. Just at the present time, the Farm Bureau is boosting the testing of county herds, and for this reason it may be easy now, to put through a plan of safeguarding the milk supply, where that is not yet done.

Dr. G. P. Reed, Davis City—I find that the great trouble in dealing with this question is in getting information back to the country people. With this difficulty in mind, down in our town I have for a number of years made this rule: One day each year I invite the eighth grade pupils to my office, and I usually have about two tubercular children there. We make an examination of the sputum in these cases and show it to the pupils in the room, and we talk about these patients, the subject of prevention, etc. I have carried out this plan for many years. Many pupils of the eighth grade have grown up and are now heads of families. In that way we are able to educate them until the entire community is fairly well informed along that line. It might be well for the rest of you to think of this plan.

Dr. John F. Lossbrock, Lacena—The chief consideration, especially as regards the little tads and the diseases of children, is to everlastingly preach these things as we have opportunity to see the mother. Keep these women educated, and the best way to do this is to drop a word now and then when making calls, and pretty soon you will have a few cases receiving toxin-antitoxin as definite proof in the community that you got these families by without diphtheria. This brings the matter home to the people, and, especially as the women now have the vote, when you have them started you will get almost anything you want.

Dr. Don M. Griswold, Iowa City—I wish to say a word regarding Dr. Chittum's statement that 20 per cent of the children having negative Schick test developed diphtheria within a year. The Schick test, like every other highly technical test, is very accurate. It is accurate in exactly the degree that the individual who does it is accurate, and only that. None of us would say that we are 100 per cent accurate in anything. My experience has been the same as that of Dr. Chittum; I have had to explain why diphtheria has developed in children supposed to be immune to the disease, but seldom was there more than one per cent of such cases. I have done 100 Schick tests and missed only one or two. This possibly comes from the experience of years and doing the test perhaps 100,000 times. There are cases in which the toxin-antitoxin does not protect. I fear that Dr. Chittum is a little pessimistic about that. Fifty per cent of people will be immune for five years with one injection; with two injections 75 per cent will be immune for five years, and with three injections nearly 90 per cent will be immune for that period. Dr. Chittum states that about 20 per cent receiving the toxin-antitoxin contracted diphtheria within six to eighteen months afterwards. If we run Schick tests, at the end of three months after toxin-antitoxin administration we find that 20 per cent of these people are still susceptible. Without further toxin-antitoxin, just leaving them alone and giving the Schick test at the end of the year, we find that 10 per cent more have developed immunity during that time. I do not believe that we can go farther than to say that when given the toxin-antitoxin, about 20 per cent of people are still susceptible after three months. That is why we are reversing the usual practice and doing this work as referred to by Dr. Connell—giving the toxin-antitoxin first and carrying out the Schick test afterwards. If we do that we can pick up the 10 per cent who were not immunized on the first administration and give them the second series of three inoculations. It has been my experience that the second series of three inoculations with toxin-antitoxin developed the desired degree of immunity in this small group in which the first series was not sufficient. Diphtheria could be eliminated from the small school if the board of health in conjunction with the school board would adopt a practice something as follows: 1. Give toxin-antitoxin to all children attending school. The incidence of natural immunity to diphtheria among school children is so low that it is well to give them all toxin-antitoxin. 2. At the opening of school the next year all those who have received toxin-antitoxin could be given the Schick test, and those who were needing a second series of three inoculations, could be given it then. All new pupils entering the school would of course be given toxin-antitoxin and the Schick test the following year. This would eliminate diphtheria among the school

group and would materially reduce the amount of diphtheria in the community. This would require a sane and unemotional attitude toward the prevention of communicable diseases and no doubt would be the forerunner of real constructive work along this line.

Dr. Milo M. Loomis, Manilla—I just want to say a word about the survey culture which we made in the attempt to avert an epidemic of diphtheria. Three years ago we had the beginning of an epidemic in our town and inaugurated a survey of the schools, as the result of which we picked up seven carriers out of a school of 325. If another case broke out any place we surveyed that entire grade again, in that way finally being able to pick out every carrier in the school and immediately stopping the epidemic. The community became educated on the matter and saw the benefits of the survey culture. Last fall another epidemic started. We had a series of sore throats through the community, which often received no inspection. There had been no clinical cases of diphtheria seen. One case of clinical diphtheria appeared in the community while I was absent in Omaha. The mayor had learned this proposition and telephoned me to come home immediately and do another survey culture. I did so, the first day culturing 275 children and out of that number were picked 27 carriers. The experience of the State University shows that about 2 per cent of people in the community are carriers all the time. You might call that a normal proposition, but when the number of carriers rises to about 10 per cent there is going to be an epidemic of diphtheria. That fact emphasizes the value of this survey culture in the schools as preventive of a diphtheria epidemic. We kept those children isolated, some of them seven weeks because we could not render them negative. They would be positive week after week, and I presume that today some 1 or 2 per cent of them are still carriers. In regard to toxin-antitoxin, I have immunized practically our entire school of about 325 pupils. There were possibly six or seven families, representing perhaps fifteen pupils, who objected to immunization. We cannot control that feature, there is no law compelling them to comply with our wishes in the matter, but we sent out a card saying: "If you are not willing to have your child receive toxin-antitoxin, please sign this card and return it." That definitely put the question up to them. Only seven families returned those cards signed. The rest of them kept the cards and we went ahead and immunized their children. Therefore practically the entire school has now received the toxin-antitoxin. I think this fall we will Schick-test the bunch if we can, and those children that are positive we will again immunize. And so for the prevention of an epidemic of diphtheria I would recommend the survey culture early in the game, and the toxin-antitoxin can be used later to establish immunity in the community.

Dr. Connell—In making any survey of carriers in a school I think it is important to know whether or not these carriers have the virulent or the non-virulent type of organism. If the non-virulent type, they can be practically eliminated, as they are harmless. In my opinion, only carriers that have the virulent type are dangerous, and it would be well to do a virulence test and if the individual has the non-virulent organism he can be released. The general practitioner can get along very well without the activities connected with preventive medicine, but the activities of preventive medicine cannot get along without the practitioner, and, as stated, immunization of school children, especially as regards diseases like diphtheria, is of the greatest importance. I believe that the question of providing a safe milk supply would be solved by the county health unit. Health education should be begun during the school period because that is the important part of life in teaching these fundamentals of health.

Dr. Chittum—I simply want to say a word about the survey culture, referred to by Dr. Loomis. We took up that plan, but were not successful in eradicating diphtheria quite as quickly as did Dr. Loomis. Referring to our state board of health laboratory, Dr. Eiker stated yesterday that the state laboratory activities were hampered by the appropriation being cut down. In my paper I have referred to the time elapsing before we can get returns from the laboratory, therefore I feel that the state should furnish the laboratory with sufficent funds so that it could be kept open all the time except during sleeping hours. Dr. Griswold has a highly specialized technic enabling him to secure better results, but our toxin-antitoxin supply was sent to us by the state board of health. Each one of the patients reported received three doses, and no cases have been considered here except those in which the individual contracted diphtheria after the expiration of three months and not longer than eighteen months following the giving of toxin-antitoxin.

THE TREATMENT OF CHRONIC ULCERATIVE COLITIS AS BASED ON THE DEMONSTRATION OF A DEFINITE CAUSATIVE MICROORGANISM*

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Ulceration of the colon may occur from many causes. Organisms within the colon may produce mild or severe grades of inflammation and ulceration. To this type belong *entameba histolytica, balantidium coli,* dysentery bacilli, and the bacilli of tuberculosis. As the colon is an organ of excretion ulceration may occur as the result of the excretion of disease toxins, poisons and drugs. Colonic ulceration is occasionally seen in the terminal stages of nephritis, also after the administration of arsenic and mercurochrome.

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Among the various types of ulceration of the colon is one known heretofore by various designations. It has been the custom at the Mayo Clinic to call it idiopathic chronic ulcerative colitis. This disease has a definite clinical picture, typical roentgen-ray findings, and a characteristic proctoscopic appearance.

The disease was first mentioned by Wilks and Moxon, in 1875, but was first described by White, in 1888, although Hawkins believes the "pedigree of this disease can be traced back nearly three hundred years to the 'bloody flux' of Sydenheim in 1669". The etiology has been puzzling. Hawkins, in 1909, in a consideration of the natural history of ulcerative colitis, described the hemorrhagic form with "its primary localization in the lower segment of the colon"; and emphasized the necessity of determining its exact bacteriology, not by examining the stools, but by scraping the mucosa of the colon. He concluded that a specific serum should be ideal, since the lesions are localized and the blood is not invaded. Bassler and others believed that *bacillus coli-communis* was an important etiologic factor, asserting that this organism became especially virulent under proper conditions. Bassler ventured the designation of *pseudodysentericus coli* for the predominant organism found in some of his patients. Many investigators include as etiologic factors the ordinary bacteria found in the feces. Jex-Blake, in reports from London hospitals in 1909, considered *bacillus coli, bacillus proteus* and *bacillus pyocyaneus,* and streptococci as factors. White thought certain of his cases were due to *bacillus coli,* and others to pneumococci. Stone and Yeomans found only the usual intestinal inhabitants. Wallis found streptococci in the stools of many of his patients, and emphasized the importance of oral sepsis. Hewes spoke of idiopathic invasions of the colon in persons in perfect health. He isolated streptococci, staphylococci, colon bacilli and gas bacilli, and emphasized the fact that often the disease appears as a sequel to some other infectious disease, such as pneumonia, influenza, measles, or diphtheria. Mummery considered streptococci and *bacillus coli* important factors, and, in the hemorrhagic form with its spongy mucosa, regarded the diplococcus of pneumonia as the usual cause. He says that the mucosa in this type bleeds easily, is granular, and appears as if sandpapered. Other observers believe the condition to be the result of a former infection by some form of dysentery bacillus, *bacillus dysentericus* having disappeared from the stools and left its results with secondary invaders to keep up the infection. Einhorn, Hurst, Leusden and others seem convinced of this theory, and Hurst reported good results from the use of polyvalent antidysenteric serums, while Leusden advocated treatment with autogenous vaccine.

The type of lesion, its extent, and progression made me suspect that the cause was an infection. The results of two years' study have, I believe, established this. Although at the outset of my bacteriologic study of this disease, attempts were made to isolate dysentery-like bacilli, I soon became impressed by the presence of large numbers of gram-positive diplococci in smears from the lesions in the bowels of patients with ulcerative colitis and in primary cultures in glucose-brain-broth, the medium used by Rosenow and others in localization studies. It was believed, therefore, that growth of the causative organism might occur in this medium, since it afforded a gradient of oxygen tension, whereas only the more saprophytic organisms might develop on blood-agar plate-cultures. Furthermore, it was thought that localization in the colon might occur following the intravenous injection of the primary mixed culture, and possibly the causative organism might be isolated from the tissues of animals developing lesions.

Working along these lines, I have been able to isolate a gram-positive diplococcus in about 90 per cent of the patients with chronic ulcerative colitis who have been examined in the clinic the last two years.

Patients are prepared for the taking of cultures by thoroughly cleansing the bowel lining with repeated warm water enemas and by swabbing the mucosa with clean swabs, and finally scooping the material from the base of the ulcers with sterile swabs and transferring it immediately to warm glucose-brain-broth. Sometimes the surface of the lesion and the neighboring mucosa is swabbed with tincture of iodin and the diplococcus isolated in pure culture. Similarly cultured periapical abscesses of teeth and septic tonsils have been carefully cultured in cases of acute exacerbations of the disease, and a diplococcus morphologically identical found.

The organism is lancet-shaped, resembling in a striking way the pneumococcus, except that it is slightly larger. In the disease-producing state, it is always a diplococcus. Later, after repeated subculture, it may grow in short chains so that it probably is a form of streptococcus. It ferments dextrose, lactose, saccharose, maltose and salicin, but never inulin or mannite, the former thought to be characteristic of the pneumococcus, the latter of *streptococcus faecalis.* The strains I have tested were not agglutinated by the three types of pneumococcus serum.

The findings have led me to formulate two conceptions of this disease: that it is infectious, and that the infection occurs with successive "showers" of bacteria being thrown into the colon, probably through the blood stream. Clinical, roentgenologic, proctoscopic, necroscopic, and experimental findings lend most convincing support to this view.

Most patients with this disease can definitely date their trouble to an acute upper respiratory infection such as a cold or tonsillitis, to devitalization of a tooth, or to infection in some distant part in the body. Further, with each successive cold, an acute exacerbation of the colitis occurs. It has further been noted that eradication of foci, such as infected teeth and tonsils provide, is followed by severe exacerbations of the disease, some times with prostration and many bloody stools.

When once the disease becomes chronic, the salient clinical features are continuous or intermittent intractable bloody diarrhea (sometimes with abdominal pain), anemia, fever, and general debility. The infection begins in the rectum and lower colon and progresses upward to the cecum, sometimes invading the lower ileum. It may remain localized in the rectosigmoid region for months or even years.

Extreme anemia, with hemoglobin as low as 25 per cent, exhaustion, degeneration of viscera, and cachexia may complicate the disease. The most common complication is arthritis, and the most serious one, perirectal abscess.

On roentgenologic examination the colon is narrow, non-haustrated, lacking in redundancy, and often shows narrow areas of either spasm or stricture. In the acute phase, the bowel may empty so quickly that only an irregular, fringed outline may appear. In the early stages there is no contraction but as chronicity becomes established and the disease advances, the picture becomes more and more characteristic.

The proctoscope reveals, in the early stages, an edematous, hemorrhagic, granular mucous membrane. The granules have been demonstrated repeatedly to be miliary abscesses. These break down, forming irregular, shaggy, superficial or deep ulcers, depending on the extent of necrosis, with ragged edges and no special point of origin in the mucosa. In the later stages, one sees "footprints" in the bowel wall, with disseminated, heaped-up tufts of mucosa. Later still, the mucosa may be entirely denuded and leave a much thickened submucosa and muscularis. From the miliary abscesses, I have been able through the proctoscope, after painting with tincture of iodin and aspirating with a Pasteur pipette, to obtain pure cultures of the diplococcus. At necropsy, the wall of the colon is much thickened with layer on layer of fibrous tissue and extensive ulceration and is practically devoid of mucosa.

By injecting mixed and pure cultures of this organism intravenously into rabbits and dogs I have been able to produce lesions in all essentials like those of the early ulcerative colitis in man, not only in their appearance but in their site of election. Massive diffuse or disseminated submucous hemorrhages and minute ulcers have been produced in the lower one-third to two-thirds of the colon. From the mesenteric lymph nodes and the blood stream, I have been able to re-isolate the organism, which, when re-injected, again produced similar lesions. Furthermore, I have isolated it from the gall-bladders of rabbits injected with the organism in a very virulent form. Isolated from the periapical abscesses of teeth in patients during an acute exacerbation and re-injected into rabbits, the organism has again produced similar lesions. As a result of these findings, it seemed justifiable to prepare vaccines and vaccine-filtrates after the methods of Rosenow, and these have been injected subcutaneously.

In the last eighteen months I have treated about 125 patients with this disease, and have been able to keep fairly accurate records of 100 of them; the results, which I shall report, are based on these 100. The patients receive either vaccine or vaccine-filtrate in increasing doses to a certain dose and then, for several months, the maximal dose is given. Injections are begun with 0.1 c.c. daily, increasing every third day by 0.1 c.c. up to 1.5 c.c., unless systemic or intestinal reactions occur, in which case the dose is reduced and injections are given more cautiously. These injections should stimulate the formation of specific antibodies.

The tincture of iodin is also given empirically, for with this alone, before the use of the vaccine, remission of the disease was produced in several cases. Its action is uncertain, but a leukocytosis is often noted at the time of its administration. When the lesions are low-lying, that is, when the highest lesion can nearly be reached by the proctoscope, local and topical applications are given. In about 20 per cent of the cases the lesions were of the low-lying type. A general diet has been allowed, only the seedy fruits, rougher vegetables, and foods which have not been well borne being withheld. Plenty of milk, cream, eggs, orange juice, and so forth, are advised.

Ileostomy is performed only as a life-saving measure and in only a few cases.

Conclusions

Chronic ulcerative colitis is an infectious disease, the infecting organism most likely being the diplococcus described. The treatment described restored more patients to health and usefulness than any heretofore attempted.

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CECAL PTOSIS*

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In discussing this subject one treads on dangerous ground, because of the likelihood of neurasthenia and other functional nervous disturbances occurring in the sort of a person, who is by nature so formed that cecal ptosis is quite possible. Most ptotic people are of the long, narrow, more or less emaciated type. These people are all too well known by us all to suffer from many diverse and unusual neurotic complaints.

Cecal ptosis usually occurs as part and parcel of generalized visceral ptosis, which condition I do not wish to include within the scope of this paper. There are however some well marked cases, who, I believe, suffer entirely from the condition I am about to describe. I lay no claim to any originality either in the recognition of this condition or in describing its surgical cure. This all belongs to Coffey, and has been carefully described by him in his monograph on enteroptosis.

By cecal ptosis I mean the falling or slipping downward, into the pelvic cavity, of an enlarged, balloon-like cecum, and dragging after it the ascending colon; which condition is permitted by a loose and movable attachment of the cecum and colon to the postero-lateral abdominal wall. To appreciate the cause it is necessary to understand cecal anatomy and embryology.

The embryo at about the sixth week has begun to have its stomach assume permanent form. The primitive septum is pulled upon by the elongating gut tube. After the stomach has turned transversely the gut tube, below the stomach a short distance, shows a budding process—the future cecum. This bud lies over the duodenal precursor, and here takes its attachment to the paravertebral tissues, by and to a mass of undifferentiated cells—the future peritoneum. The small gut has been forming coils by elongating, and the stomach has developed further to the left. The cecal bud is attached to the abdominal wall, as a rule, just above the ileo-cecal valve region, but this attachment may appear higher; which fact is of importance in future mobile cecum. The cecum makes no grand sweep over to the right iliac fossa, as has so often been schematically pictured in text-books, on the contrary, as the ascending colon elongates, the cecum plows along, by being pushed, over this relatively undifferentiated mesothelial tissue, to which it is attached, to its permanent resting place—the ileo-cecal fossa. Cecal descent along the right lateral abdominal region secures attachments, which, when traction is applied, produce plicæ. These normally disappear later unless disease causes their persistence. The most fundamental of the problems in the final relation of the viscera to the peritoneum and abdominal wall has to do with the behavior of the mesenteries. Two general notions appear. The older writers believed that when an organ had a mesentery and later lost it and became wholly or in part retroperitoneal, it became so because the two layers of mesentery spread out, and allowed the organ to divest itself of a serous coat. Toldt shows this general conception to be wrong. What really occurs is a fusion of one surface of mesentery to parietal wall, because the mesentery is merely a mesenchymal mass covered with a layer of embryonal tissue, which has great power of fusion. Such

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fusion takes place so early the cecum has not taken its permanent position, so that later sliding must occur for it to get into position.

Permanent cecal fixation depends upon its being fastened, over its posterior surface, to the loose areolar retroperitoneal tissue and encapsulated fat over the psoas muscle. The transversalis fascia, which encircles the abdomen is in places, such as the kidney and cecal regions, so thin that it resembles peritoneum, and gives no additional support to these posterior attachments.

In the adult the fusion between the primitive parietal peritoneum and the colonic peritoneum is so complete that the parietal peritoneum appears to pass over the colon. This would appears to be a support, but it is not so, because peritoneum never exercises a sustentacular function. This function being provided by elastic tissue, laid down by nature, where support is needed. Coffey has shown this follows the mechanical laws of stresses and strains, incidental to proper bracing. This elastic tissue can be seen, when well developed, by the naked eye, and appears as bands or fan like projections of membrane. The further the cecum descends the more the pull on the right kidney by way of the ascending colon, transmitted through the right reno-colic ligament, until finally a heavy deposition of fibro-elastic tissue occurs in the attempt to provide support. These lines of fibro-elastic tissue are no doubt the basic cause of renal ptosis occurring so frequently secondarily to right colon and cecal ptosis, and they also explain the failure of kidney plastic surgery to support ptotic kidneys, unless the right colon and cecum are anchored in place, so they may no longer act as the dragging force upon the kidney.

From a gross anatomical standpoint the adult cecum presents the following points of interest in connection with ptosis. Its fixation to the posterior abdominal wall is entirely due to four things. First, the loose areolar tissue covering the psoas muscle; second, considerable support is given by the ileo-cecal valve region in its backward post-peritoneal entrance to the cecal cavity; third, by the covering folds of peritoneal tissue; fourth, by the blood-vessels entering the cecum and ascending colon, which are branches of the mesenteric, namely the ileo-colic and right colic arteries. Descent is limited somewhat by these vessels when they are put upon the stretch, and this stretching would produce folds in the peritoneum. A glance at the above is all that is necessary for one to realize that anatomically the cecum is poorly fixed in place. Should the cecum arrive in place after its descent, loosening and slipping are still anatomically easy.

Coffey, by vertical section study on frozen cadavers, points out the hitherto unnoticed point, that the posterior abdominal wall is not a flat surface, but an inclined plane running from the diaphragm downward and forward toward the pelvic brim and the promintory of the sacrum, and from there backward and downward. The forward angle above the pelvis is about 50 degrees, which makes a very noticeable shelf-like support for the abdominal viscera. When slipping occurs if it proceeds beyond the slightest extent, it allows the cecum to slide over the pelvic brim angle and kink itself at nearly a right angle; which fact explains many of the symptoms of the condition.

A simple resume of the above shows the cecum and ascending colon to begin development at a point far distant from its ultimate resting place, and to travel towards its final home by a slow and steady progress due to gut elongation; that its attachment to the posterior abdominal wall is early and constant; that its attaching cell bundles are undifferentiated mesothelium; that is spread out as the cecum travels; that fixation is never firm nor permanent; that abnormalities of position and attachment are easy to conceive and that freakish maneuvers in its travel are possible, and the surprising thing is that they are not more common.

The above data allows for some interesting speculation as to the pathogenesis of the disease.

Glenard believed it to be a falling of the right colic flexure and a consequent slipping of the cecum and colon.

Stiller's view was that it is a congenital defect along with a constant organic type of slender skeleton, long thorax, soft muscles, and loss of fat deposit.

Einhorn believes corsets to be the cause.

Quincke gives three causes, namely—relaxation and stretching of the abdominal wall, change in the form of the abdominal cavity, and stretching of the supporting ligaments.

There are many other theories all of which can be grouped into three main divisions as follows:

1. Congenital defect theory.
2. Pressure theory—the pressure being due to clothing, corsets, trauma, weak abdominal walls, pregnancy, etc.
3. The middle ground, between the two groups.

It is of vital importance to remember that neuroses and all sorts of vague complaints are usual in this type of person, and that no person should be considered as a primary cecal ptosis whose symptoms are other than mechanical and whose complaints lead away from lack of bowel activity.

Pain is not sharp nor severe, and confines itself to a vague aching and pulling over the right lower abdomen. Pain in the back, near the kidney region, and backache are common, because of the dragging down on the right kidney. Occasional colicky attacks occur, which are no doubt due to distension and enforced emptying of the cecum or to kinking by the cecum slipping over the pelvic brim.

Constipation is the rule. The habitual use and the demand for cathartics is constant. The stool is the dry hard stool of colonic delay. Flatulence is a frequent affair.

There is a peculiar gargle, that is quite pronounced when these people are placed upon their backs and pressure made over the lower right abdomen. This can be both felt and heard, and is due to the cecum slipping upward into normal position.

The most characteristic sign is funished by x-ray examination. With an eight hour barium meal given beforehand and the patient standing in front of the fluoroscope, the dilated cecum can be easily seen to be down below the pelvic brim, and the meal remaining there in it. Placing the patient upon his back shows the cecum to have immediately traveled upward to its normal position.

Dyspepsia occurs intermittently as in any condition producing lack of bowel elimination.

The general systemic evidence of a neurotic inheritance are usually evident, such as anemia, the long stooped body, sharp costal angle, nervous expression, etc., and are only incidental. I must reiterate here that I am in no way concerned with the neurasthenic side of the situation, and the cure advised for the ptosis does no good for the neurasthenia, and that operative relief is only indicated where the mechanical symptoms of bowel slowing up are the chief complaint.

At operation the cecum is seen to be two or three times the normal in size, and can be easily picked up and frequently brought completely outside the abdomen. I have seen a case or two with an almost complete mesentery. Unusual membranes and depositions of fibrous tissue, in the previously mentioned lines, are easily demonstrated. The right kidney is usually ptotic. The hepatic flexure and its supporting ligament is always loose and longer than usual. Other intra-abdominal evidence of ptosis may be present. A long right paramedian incision is necessary for adequate exposure. The cecal size is first reduced by cat-gut stitches, running in a partial purse-string manner from the anterior longitudinal band outward so that the cecal size is reduced to about one-half or more. These rows are placed one above the other until well up on the ascending colon. The cecum and colon are then anchored to the parieto-posterior abdominal wall with a series of purse-string stitches running from the bowel out over the peritoneal surface for two or three inches, these stitches placed one above the other at about one inch intervals so that when they are snugged up and tied the bowel is fastened firmly in normal position. These stitches are gradually worked forward a little as the hepatic flexure is reached, and they may be continued over the anterior abdominal wall if it is desirable to anchor the transverse colon. This same technique is described by Moschcowitz in a recent communication to Annals of Surgery, for the relief of sliding hernia.

This condition is the probable explanation of many attacks that have been diagnosed chronic appendicitis, and many useless operations have been done on normal appendices as a result. Loose dilated cecum is frequently encountered in pelvic surgery, and can be easily repaired if no active inflammatory reaction is taking place in the pelvis. The surprising thing is that we can so long pass it over while operating on other abdominal tissues, and how striking these cases become when they are pointed out to us, and the marked relief patients can be given by so simple a procedure. It is also worthy of note if it points out again that the much accused appendix is not the cause of all the right iliac distress.

Discussion

Dr. John T. Strawn, Des Moines—To anyone who has seen the after results of abdominal surgery the sentiments expressed in this paper should be taken seriously. The essayist has pointed out clearly that he makes no claim to originality either in recognizing the disease or in applying surgical methods to its cure. So if I have anything discouraging to say, it applies to Dr. Coffey and not to the essayist. In cecal ptosis we must remember that we are dealwith only a small part of a general condition, a condition in which hereditary tendencies play an important part. These cases are constitutional inferiors. They have not only the visceroptosis, but the abnormal vertebral arch, poor musculature, weak ankles and flat-feet. Dr. Mordesty Morris of Montreal includes in his paper a report of x-ray analyses of 600 students, the majority of whom showed ptosis of the cecum and of the stomach. None of these cases complained of any abdominal symptomatology. In the same paper he points out that ptosis occurs both in infancy and in old age and in both sexes, but predominating in the female. He also stresses the fact that ptosis is increased only 6½ per cent from infancy to old age. Therefore the acquired tendency constitutes only a small factor in these cases of ptosis. Carman of Rochester, as well as other x-ray workers, has shown by x-ray examin-

ation that the position of the cecum and stomach varies normally with the characteristic build of the individual and that ptosis is a normal position in the Stiller type of individuals. Aaron pointed out that 90 per cent of cases of ptosis are in common keeping with the characteristic body build. Sir Arnold Keith states that he has never seen an x-ray plate that showed obstruction due to kinking of the cecum. In my opinion, cecal stasis is much more to be feared in fixation and adhesions than it is from a ptosis of the cecum. Cecal ptosis is not a disease entity. The patient may go for years or even through his entire life without symptomatology. As pointed out, when symptoms do appear they cannot be accurately differentiated from the symptomatology of ptosis and other functional disturbances of the digestive tract. We never know whether the condition is due to nervousness, to spastic muscular contractions of the intestine, or whether to true ptosis or other condition that we have not found. In my own personal experience I have seen a few cases in which fixation has been done and they all have given poor results. Among the last cases Dr. Coffey operated on by doing cecal fixation was one patient who, about every time he is in town, comes to my office for abdominal symptomatology. He happened to be one of the unfortunate patients. In one series of cases that has been reported the surgeon claims a cure in 65 per cent. It must be remembered that these patients are neurotics, and the neurotics are many times healed as well as converted by many different forms of treatment.

Dr. J. F. Herrick, Ottumwa—This subject has been a live one with me for a good many years. I have on many occasions been very much interested in hearing Dr. Coffey present the subject of fixation of the cecum for these abdominal conditions. Personally I have arrived at the conclusion that there is more than a simple ptosis of the colon or the cecum. These people all have collapsed organs. I have found that the greatest benefit comes from education: Explaining to them that the chest and diaphragm should be lifted up by proper effort on their part, sometimes assisted by an abdominal support. This will accomplish a great deal in correcting the bad conditions. I have seen persons who have been afflicted with neurasthenia for years, recover perfectly by simple methods of education to the end that the chest was held in correct position, the abdominal contents being lifted by atmospheric pressure. Personally I would hesitate to resort to surgical treatment for cecal ptosis. I have great respect for the eminent men who are doing that work and of whom Dr. Johnson is a follower. No doubt he is justified from the point of view of surgery. But I do believe that in the majority of cases more can be done along the lines I have suggested than can be accomplished by fixation.

Dr. Johnson—Apparently no two extremes could be farther apart than Dr. Strawn and I in our opinions on this matter. I was careful to point out that the operation I have discussed has nothing to do with the neurasthenic side of the situation. You are not going to cure a neurotic by any surgical procedure that I know anything about. There are, however, some cases with right-sided cecal protis who have ptotic kidneys. This subject is too big to discuss in its entirety in twenty minutes. Some of these people suffer from lack of bowel elimination which basically is caused by the cecal ptosis. Many of them are neurasthenics, and in some of the earlier cases that we did I think we resorted to operation too quickly. That is, we selected the cases poorly, and operated one or two who should have been left alone. In some of the later cases where we picked them more carefully the results of operation were very gratifying. One girl gained thirty pounds. Of course, we all know that many of these individuals complain of right-sided pain whether they have anything wrong or not. However, hundreds of these people certainly have had appendicial operations, uterine fixations, electrical treatments, and lord knows what not, and basically a colon and cecum that are down, and a lot can be done for them if you carefully diagnose their condition and use the appropriate methods.

A PLEA FOR PSYCHIATRY IN THE FIELD OF MEDICAL SCIENCE*

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As a recent writer has stated, "among the many recent advances made by the medical sciences, none can approach in extent and significance those made by psychiatry".

What is psychiatry? Psychiatry is a branch of medical science, dealing with mental deviations from normal, which fact is readily understood when it is realized that paresis, e. g., makes up 10 per cent of all mental diseases. Therefore, a psychiatrist, who examines, studies and diagnoses mental diseases must be an M.D. Psychiatry must not be confused with psychology. A psychologist figures out the mental rating of an individual by well recognized mental tests, the results of which are an aid to the psychiatrist in arriving at his conclusion.

During the past twelve years this branch of medical science has grown from the small narrow field made up of hospitals for the insane to a seemingly limitless field including mental hygiene and conduct or behavior disorders. Psychiatry has ceased to be limited to psychoses or psychoneuroses, but it now takes in the field of criminology and penology; delinquency and dependence, and doesn't even spare the privacy of the home and family.

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This growth and development of psychiatry has been marvelously rapid during this short time until now a uniform psychiatric nomenclature is being rapidly established so that at present psychiatrists not only think alike but they speak alike. Surveys of jails and penitentiaries have proved that the vast majority of criminals are mentally defective. Again, surveys in the field of dependency have proved their causation to be mental aberrations.

Until 1913, the state hospitals and private licensed institutions, all isolated from the rest of the community, concerned themselves only with attention to their wards. Thus, only those legally committed were receiving proper psychiatric care and attention. However, in 1885, the superintendent of the Pennsylvania State Hospital for the Insane was far-sighted enough to see the need of some care outside of the insane hospitals, and opened a clinic in the out-patient department of the Pennsylvania General Hospital where he gave advice and treatment to mental cases in their early or incipient stages, occurring among the poor and indigent. This clinic was perhaps the first meager attempt at the establishment of a psychiatric clinic. In 1909 another sporadic clinic sprang up at the State Hospital at Ogdenburg, New York, where one day a week was set aside for the treatment of incipient mental cases that were discovered in the community and not requiring comitment.

In 1913, probably the first real psychiatric clinics were established in Boston and New York City.

In these two states the inmates of the insane hospitals, instead of being discharged, were paroled to these psychiatric clinics for periods of from a few months to two years, so that while they were at large, they were required to report to these clinics for assistance and treatment to insure proper adaptation to their environments. It was found that in order to enable these patients to carry on successfully outside of the institution, it was necessary for them to receive help in securing employment, adjusting family situations, obtaining proper medical attention, and frequently, moral support. This was the beginning of the psychiatric social service worker, who is trained in psychiatric problems, and is thus fitted to make visits to the home of the patients, assures their visits to the psychiatric clinic and looks after perplexing problems that arise.

Almost simultaneous with the origin of the mental clinic there arose a universal solicitude for child welfare. Various charitable organizations, child caring agencies and juvenile courts now have established mental clinics of their own. Even industrial and business organizations have found it expedient, as a good business policy, to establish small psychiatric clinics for a mental survey of their personnel. In 1914 Dr. King established the first army mental clinic at Fort Leavenworth in order to deal with problems that would arise among the enlisted men, and the men in the military prison. With our entrance into the World War in 1917, the neuropsychiatric division of the army was of necessity established. Every one knows of the great work and the amount of information growing out of it, which gave psychiatry and psychiatric clinics the attention they have received since the war.

Since the war, surveys have been made, the results of which have proved even to the severest skeptic, the relationship of mental disease to crime, delinquency and dependence.

"While workers in neuropsychiatry, social service workers, and directors of philanthropic organizations are well acquainted with the growth and wonderful work of mental hygiene and habit forming clinics, and the valuable knowledge gained from them, the public in general, including the general medical practitioner, knows very little of them. The average family in noticing conduct disorders among its members usually first consult the family physician for advice. In the greater number of instances he is unable to furnish any. As a result, the family, in despair, often falls prey to illegal practitioners, the quacks and faddists." Though it isn't generally appreciated, the field of psychiatry is much larger and given less attention than any other branch of the medical science.

A psychiatric unit has been described as comprising a psychiatrist, a psychologist, a trained psychiatric social service worker (accent on the trained), a nurse, and possibly a clerk.

It is difficult to draw a strict line of demarcation between the function of a psychiatric clinic and a mental hygiene clinic, a child guidance clinic, or a habit forming clinic. They are all psychiatric clinics. However, the psychiatric or mental clinic has to do with all ages and particularly the advanced or chronic cases. The mental hygiene clinic has to do with the discovery or recognition and treatment of mental defects and disease early in their development, in other words the incipient cases. After the discovery of these tendencies and their causes many of the mental defects and diseases can be cured, alleviated or prevented by care and treatment in the child guidance or habit forming clinics.

In the limited time at my disposal I wish merely to touch the high spots of this subject as it pertains to children. The field of preventive medicine is where the most far-reaching results

are obtained. Psychiatry, being a branch of medical science, mental hygiene is therefore preventive medicine, and mental hygiene has to do with children.

The case work in mental hygiene clinics differs from that of other agencies, in that case conferences are employed in every case, including physician, psychiatrist, case workers, psychologist and all others having contact with the case. In other words, the case work is more intensive.

The principal characteristics of the clinic are:

1. Organized case work.
2. The clinic is a great help to the case workers.
3. A case conference is held in every case.
4. The case work is more intensive and encourages other agencies who bring patients to the clinic to do more intensive case work.
5. Diagnosis.
6. Treatment.

Some problems of the clinic are:

1. Type of service—should it be cure or prevention or both? Then there is the question of quality vs. quantity of work.
2. Educational—Because it is rather new, there is an immense amount of work to be done to familiarize the entire community as to the function of this clinic. Parents must be taught as well as their children. To insure cooperation in the home, a trained psychiatric social service worker is absolutely necessary. Even with this service parents sometimes fail to see the light and will not cooperate. It must be made clear that the clinic does not duplicate, but aids and extends to all other agencies as well as to the home.
3. Who should conduct the clinic—just what organization should assume the expense of the clinic? This differs in different localities.
4. Diagnosis and treatment, which is the most difficult part of the work of this clinic—To arrive at a correct diagnosis an intensive study must be made in each case. The child must be given every opportunity and a square deal. No snap-shot diagnoses can be given in this clinic. You can very readily see that the decision may be very important for the child's future life.

Behavior is a complex and needs deep and careful study. After a diagnosis is made, any treatment applied directly to the patient is direct treatment, e. g.: If it is a case of fatigue cycle, the diseased tonsils and hypertrophied adenoids are the underlying cause, and their removal is direct treatment. Indirect methods of attack in the treatment are the most important and also the most difficult. The school, the social life, recreational activities, the court, the home and family life, etc., are all factors which develop the habits and mould the character of the child. It is from an intense study of all these factors in every case that conclusions must be looked for. Treatment through these factors is the indirect method.

Mal-adjustments develop early in life, even in the pre-school age. Therefore, the psychiatric clinic should concern itself principally with children.

All workers in the field of human behavior agree that the pattern of the conduct of an adult is formed during infancy and childhood. The age at which the adult personality of a child is formed has been variously estimated from eight to twelve years. Dr. Thome of Boston points out that young children, because of their plasticity, suggestibility, imitativeness and love of approbation are very susceptible to training. Because of this the child's personality can be moulded and remoulded for good or bad, and his future adult personality will depend upon his training during his tender formative period of life.

Habits in regard to somatic conditions, such as proper dietary habits, sleeping, bathing and elimination, may be easily formed and these are of vital importance in forming personality. Because of their suggestibility, all sorts of unhealthy reactions may be occasioned in children by indiscreet words or actions on the part of the parents. Because of the child's imitativeness, just as it first learns to say "daddy" and "mamma", so will it soon imitate good or bad examples set by the parents and others in the immediate environment. It must also be remembered that there are many serious mental diseases whose first clinical manifestations are somatic ones.

Those children presenting somatic disorders must be given a most careful general physical examination from every conceivable angle. Eye strain, bad teeth, malnutrition, discharging ears, anemia, irritating foci about the genitals, skin eruption, skeletal abnormalities, and cardiac and pulmonary disturbances must be actively combated. This is direct treatment.

Signs of irritability, night tantrums, insomnia, enuresis and bad sexual habits may be due to intestinal parasites. Those children displaying bad temper, lack of attention, day dreaming, excessive phantasy indulgence, undue timidity and shyness, inability to mix freely with children of the same age, undue precociousness, marked fear and anxiety, pathologic lying and stealing, marked psychomotor restlessness, pathologic sex activity, capricious dietary habits, spasms and fits all must receive exhaustive psychiatric study.

"Dr. Fernald insists upon a general physical examination, a family history, a personal development history, a history of school progress, an examination in school work, practical knowledge and general information, economic efficiency, social history and traits, and moral reaction of the patient, in addition to the psychological tests, in order to establish an adequate evaluation of the

limitations and possibilities of the mental defective in question. A mental defective with an I. Q. of 60, but of a rather pleasant and agreeable personality and of cleanly habits, who has a working knowledge of general affairs and who, perhaps, has special mechanical ability, offers a problem entirely different from the one presented by a child of the same I. Q. who is given to cheating and lying, who is irritable and pugnacious, and who has no aptitude for any work."

It is my opinion that the place to begin this work is with the children, in school and those of pre-school age, because it is from them that will come the next group of dependents, delinquents, criminals and mental patients.

After a somewhat intense study of this question during the past year, I have come to the opinion that a psychiatric clinic is the most important piece of work in the social organization of this, or any other community. An astoundingly large per cent of our children of today are going to develop into the misfits of tomorrow unless proper readjustments in their habits and lives are made.

The following facts should be of interest to us:

The criminal population of our country is rapidly increasing.

The average age of the penitentiary population in this country has been reduced from thirty-five to less than twenty-five years during the past ten years.

The major crimes of today such as murder, holdup, train robbery, bank robbery, etc., etc., are being committed by boys from seventeen to twenty-four years of age.

More crime is being committed in the United States today than in any other country on the face of the earth.

The cost of crime in this country annually has been estimated to be about ten billions of dollars, a sum which represents twelve times the cost of our army and navy, which approximates the cost of education in this country. and which is practically all paid by the taxpayers of this country.

You may be astounded by these facts as I was, but we have to face them.

At the Chamber of Commerce Council of Members luncheon meeting week before last, the speaker of the day stated that the basic cause of crime in this country today is the failure of this country to teach its children the fundamental principles of honesty. Personally, I do not agree with him in this statement. This failure to teach children the fundamental principles of honesty is simply one of the many environmental causes, or what I believe the legal profession might call an extrinsic cause.

The basic cause of crime is mental defectiveness, and what are we doing to check this wave of lawlessness? The framing of laws, the police force to seek out the criminal after he has committed the crime, the courts to mete out punishment, and the penitentiaries for incarceration are all necessary, but they are not getting at the cause. To effect a cure you must necessarily get at the cause and what are we doing in this community to get at the cause?

Psychiatric clinics are comparatively new, but they are on the increase, and are the only scientific method of getting at the case of dependency, delinquency and crime.

As a result of many surveys it has been found that 20 per cent of our school children in this country are mentally defective, and this percentage is rapidly on the increase. Two-thirds of this 20 per cent are due to heredity and one-third due to environmental causes. It is this group of mentally abnormal children which provides the vast majority of our cases of delinquency, dependency and criminals later in life. We must not lose sight of the fact that the child of today is the man or woman of tomorrow.

Let us analyze these two groups briefly—first let us take the group of mental defectives due to heredity causes. This is the congenital, or chronic group.

The following is an outline of a portion of a paper by Dr. Ravenel, professor of preventive medicine, University of Missouri read at the National Conference of Social Work at Denver last June, entitled—"Is there a Conflict between Social Welfare and Public Health?"

Both social welfare and public health have the same objective, the saving or conserving of life, and what has been accomplished? Probably the greatest accomplishment of both these agencies combined has been the reduction in death rate, especially in the first five years period of life. It is now one-third of what it formerly was. Viewing the matter in one way, it seems that we have survived because of our intelligence in conserving life. However, it is a well known fact that parents of long life beget children who are most apt to survive the first five years of life. Therefore, longevity may be considered as inherited. Constitutional fitness is inherited, and it is believed by some that infant mortality is natural selectivity, but social welfare and public health step in with their intellect and function in the defeat of natural selectivity.

Instead of the survival of the fittest of the ancient Greeks, all argument today is in favor of the saving of life. Yet in spite of this, natural selection does reign supreme in some instances, as

for example in the case of hemophiliacs. When we study this question from the standpoint of social or economic welfare it is thought by some to be a question whether or not any good will come from our special efforts in the expenditure of time, effort and money in the saving of the lives of the approximately 800,000 to 1,000,000 in the United States today, who are mentally defective. If this group of mental defectives, with their rapid multiplication is a menace to this country, what is going to be the outcome of our efforts to conserve their lives? The crux of this question is in the following facts. Higher education has a tendency to sterilize and postpone marriage and reproduction until late in life. Many of the educated women take up business or professional work and never get married. According to statistics, graduates from one of the largest women's colleges in the United States—Vassar—average about one-half a child per graduate in reproducing their kind. On the other hand, mental defectives marry young and often and have an average of from six to ten children who are mental defectives like their parents.

The essayist stated that he was not offering any solution to the problem, and did not wish to be misunderstood as advocating any lessening of the noble work of both social welfare and public health in the saving of lives, but wished only to give this side of the question to stimulate thought, because he was of the opinion that the decrease in reproduction of the select mental stock and the increase in reproduction of the low grade mental stock in this country is appalling.

Compiled from Statistics, Most of Which Are Given by S. J. Holmes in "The Trend of the Race"

Year	Children Per Family	Average Per Graduate	
1851–60	3.13	1.68	Harvard
1881–90	2.06	1.55	Harvard
1851–60	3.32	2.53	Yale
1881–90	2.04	1.53	Yale
1833–40	4.49 Male	....	Wesleyan
1901–10	.81 Male	....	Wesleyan
1871–80	2.60 Female	....	Wesleyan
1901–10	.69 Female	....	Wesleyan
1803–09	5.60	....	Middlebury
1875–79	1.80	....	Middlebury
1830–39	4.00	....	N. Y. University
1860–69	2.50	....	N. Y. University
1842–49	2.77	2.37	Mt. Holyoke
1890–92	1.91	.95	Mt. Holyoke
1870–79	2.78	....	Vassar
1900–09	.68	....	Vassar
1890–99	1.71	....	Bryn Mawr
1900–09	.77	....	Bryn Mawr
1880–89	1.66	....	Wellesley
1890–99	1.10	....	Wellesley

A professor of history at Harvard University is said to have made the statement that "this country is headed straight for a fall, not because of licentiousness, which caused the fall of Rome, but because of mental defectiveness, and the optimism of the people of the United States in the face of this is appalling". The crime wave that is sweeping this country, which psychiatrists claim is due to mental defectives would make us think the Harvard professor is not far amiss in his statement.

As to the other group, the one-third of the 20 per cent of mental defective children where the cause is due to environment.

The child's environment is made up of all its activities and contacts; the home, the school, the recreational, the church, etc., etc. Obviously the home is the most important of the child's environment. Time will not permit me to dwell upon all these factors in the child's environment. Though they are all important, to my mind the home is the most important and I can at this time only dwell briefly upon this one factor.

"The home is often the battle ground upon which the child's future is sacrificed. In the beginning the child is always dependent and the child's development of independence is usually the hardest for the home to overcome. If the child is never allowed to exercise his own initiative and is always babied and directed in his actions, his personality is seriously affected." Too many parents act along the line of least resistance and do the thing for the child instead of teaching the child to do the thing itself because it is the easiest and quickest way to have the matter done with.

Over solicitude is another bad fault with parents. For example, Mary has always been weak and delicate; she has such a poor appetite and cannot eat of many different kinds of foods. This is the common talk of the household, especially at meals. Mother is very sorry for Mary and if visitors are in the home Mary's poor appetite and delicate state of health is the topic of conversation, and always in Mary's presence, so that poor Mary is forced to believe that she is a very frail and delicate girl who cannot eat. However, when Mary goes away from home on a visit among other children, who are not taught that they are delicate and cannot eat, and where she is not handicapped by over-solicitude she soon begins to forget herself and eats like the other children, and as she should.

John is a terrible boy; he is very destructive, is a regular devil and cannot be controlled by his parents. He is told this day in and day out, or is present to hear his parents tell others about it. If

John doesn't think so himself, he soon will, and enjoys the spotlight of having others think so.

Katie has a reputation, because of the whole family constantly harping on it, of being shy; she is absolutely made to believe that she is a nonentity, especially when visitors come to the home; while if no attention was paid to her, or if it wasn't constantly suggested to her that she is shy, with a little encouragement she would be normal like other children.

Interference of relatives, special likes and dislikes, favoritism, fault finding, bad examples by parents, etc., are all positive factors in the home which cause personal deviation of the child.

"The child is like a young flower. If properly cared for, and if environmental conditions are suitable for that particular plant, it will result in a wonderful blossom. If the average child receives reasonable care and attention, it will produce a full, wholesome and normal personality. If, on the other hand, the environment is unsuitable and unhealthy, and if the child does not receive proper care and attention, it will become a stunted, unhappy personality, with potentialities for developing into an adult dependent or criminal."

What we need here in Des Moines and what every community should have access to is a psychiatric clinic.

Very little can be done to improve the mentality of the heredity group, but they can be picked out, classified and directed in their education along the lines of work with their hands instead of with their heads so that they can become respected self-supporting citizens and take their place in our social life. It is pathetic to see children of this group in school where an attempt is made to cram knowledge into their heads and forced through grades beyond their mental capacity. This discourages them. They do not have to be put in the corner with a dunce cap on their heads to make them know they are not keeping up with their classes. They are virtually forced into truancy and delinquency. You will find them down the alley with the gang, delinquent, eventually reaching the courts and are criminals.

A child of this group cannot be trained or fitted for the professions or any occupation requiring mental work any more than you can drive a square peg into a round hole. Any such effort with them results in misfits in the field of human endeavor. On the other hand, if these children are trained to work with their hands, they are happy, contented, industrious and successful in life.

The environmental group of the mental defectives need mental hygiene, child guidance and habit-forming clinics, where their bad habits can be corrected and their lives moulded or remoulded so that they will become respected, self-supporting citizens instead of dependents, delinquents and criminals.

Tuberculosis, cancer and other serious physical maladies have been called plagues. However, it is now discovered that mental defectiveness is a greater plague and menace to this country than all these others combined.

The principle causes for the prevailing conditions are:

1. Absence of an adequate public appreciation of the vital importance of cause and effect of mental defectiveness.
2. The almost universal prevalence of ignorance and apathy among the classes most endangered.
3. Utter inefficiency of our present feeble attempts in this field of endeavor.

It must be impressed upon the minds of every one that mental health is just as important as physical health. A mental illness is much more difficult to detect and cure than a physical illness. If a child has pain as a symptom of physical illness, it complains to the parent and the family physician is sent for at once. In the case of mental ill health, on the other hand, the child does not always complain of the symptoms. Too often he takes pleasure in and is secretive about them. Parents must be taught to be close observers of their children, their actions, and activities. In fact, about the most serious occupation that I know of today, is that of raising a family of children.

About sixty or seventy-five years ago, when the death rate began to exceed the birth rate, especially in congested districts like large cities, public health began to receive more attention. Health laws were enacted or improved upon. These comprised sanitation and quarantine regulations, etc., etc., until now the physical well-being of every community is well safeguarded.

Up to about ten years ago, nothing had been done in this country to check the spread of mental ill health except in the so-called field of insanity. During the past ten years the field of mental health has developed rapidly until now it is on a safe and sound working basis. Mental health needs the same educational propaganda and publicity that physical health has received.

It would be unthinkable to suppose that a tube of pure culture of some pathogenic bacterial organism could be purchased over the counter of a bakery shop for widespread distribution and the

spread of disease, yet any child in this community in its developing and formative period of life can step up to any news stand in this city and purchase vile publications from the garbage can of literature, that will cause a mental disease, which is just as serious in its results as a physical disease; and it must be kept in mind that mental disease may be just as contagious as physical disease.

By thorough medical inspection and examination in our schools all children discovered having not only contagious diseases, but even scabies or impetigo, are forthwith dismissed from school and are not allowed to return until they can give a clean bill of health, which is a correct procedure. If the disease is of a contagious character the child is even quarantined to prevent the spread of the disease. However, a child with a filthy mental disease is allowed to remain in school and thus the mental disease spreads unchecked.

In most parts of the United States the provisions of a health board or a health officer are obligatory.

Dr. Haven Emerson writes "How gradual and submissive have we become to the right of entry into our sick rooms by health officers, without court warrants, on suspicion alone, to search for possible cases of communicable disease. How we welcome the searching and penetrating eye of the badged emissary of health laws who warns us of a hazard in a well or privy, who stops our sales of food and confiscates our dairy products lest disease spread", and I say to you that until such times that the health laws of our community and country at large are made to prevent the spread and multiplication of mental disease in the broader sense, mental disease will continue to be the greatest plague menacing this country.

"The fight against man's last spectre (mental disease) is every one's."

"You cannot be a citizen, you cannot live in any community, you cannot share in the burdens of public cost, however indirectly, and not wish for the success of the attack on mental disease and defectiveness, the safeguarding of mental health, which is mental hygiene."

"A mental hygiene program cannot be carried out successfully by the medical profession alone. Just as the tuberculosis movement required the active cooperation of a large majority of the public for success, so does the mental hygiene movement require widespread interest and help on the part of the community at large to achieve its goal."

The goal will not be reached in a day nor a year. Widespread apathy and ignorance of the cause and effect of mental defectiveness is a strong interference to overcome, but our duty is to overcome these obstacles. As Professor Charles Scott Berry of Detroit expresses it—"Can anything be more unintelligent than for the intelligent not to get at the cause and consequences of the increase in unintelligence and try to check it?"

What this community needs is:

1. A mental hygiene committee composed of interested lay and professional people who will make it their business to study this question and spread the gospel.
2. A central psychiatric, or mental clinic.
3. A thorough physical and mental examination of every child during pre-school age or at least when they enter school.

In closing I am frank to admit that a good portion of this paper is not original thought with me. I am not a phychiatrist nor a psychologist. I have simply given to you this view of the situation as it appears to me as a general practitioner.

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I am indebted to Mazyck P. Ravenel, M.D., Professor of Preventive Medicine, University of Missouri, for the table of statistics embodied in this paper.

COOPERATION IN THE MANAGEMENT OF PEPTIC ULCER*

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It has seemed profitable to me to review the results of our collective efforts at the University Hospital in the management of peptic ulcer. I have been somewhat disappointed in these results. It has been a delightful experience, however, to work with medical and surgical associates who are in accord in their general view upon this subject and who also are endeavoring each year to secure better end resuls. Full cooperation in the treatment of gastric and duodenal ulcer implies the maximal associated effort to restore the patient to health. This organized and harmonious endeavor includes the physician or internist, the roentgenologist, the surgeon, the specialist in the diseases of the upper respiratory tract, the dentist, and certainly the patient. By the internist peptic ulcer has been usually thought of as a "medical" disease. The surgeon too frequently considers the ulcer as a surgical condition destined to sur-

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gical treatment after the physician has failed. I am sure that both of us in the past have been too near-sighted; each has often been too well satisfied with his own particular type of management.

I may mention some of the short-comings of the physician. He is likely to forget that temporary relief is not cure and that only permanent results are of much value. He is prone to magnify the surgical risk and surgical failures. Too often his diagnosis is wrong. Skilled diagnosticians probably overlook an ulcer at least 5 per cent of the time and in 5 per cent or more of those conditions diagnosed as ulcer, an ulcer is not present. Both physician and surgeon often forget that the chronic ulcer is a result which must have some cause and until that cause has been removed the ulcer may fail to heal or it may recur. The physician also is often forgetful of the economic situation of the patient and the hardships and effort entailed by the prolonged routine and discipline which he prescribes.

The surgeon who so frequently sees the disease in a more advanced and complicated form usually magnifies the menace of the ulcer, belittles the operative risk, and minimizes his own failures. This portion of the surgeon's practice is so largely derived from medical failures that he is often unaware of a moderate degree of medical success. A brief period of dietary management is rarely a cure, but it is just such a treatment to which Dr. William J. Mayo unwittingly refers when he speaks of the patient having nine medical cures before applying for surgery. The surgeon is also likely to assume that when the patient recovers from his operation and leaves the hospital he may record the condition as "well". We are all prone to forget that the most that we do is to assist nature.

For the treatment of any disease a knowledge of the full pathology of the individual is most desirable. It is not sufficient to diagnose the mere probable existence of ulcer, but as exactly as is possible we should aim to visualize the entire pathology not only as concerns the location, duration, size, depth, number, and complications of the ulcers, but also their etiology in so far as this can be surmised. The existence of associated diseases, abdominal or general, must also be determined. In my review of my own cases I have found striking failures exemplary of this lack of proper information or incomplete diagnosis.

I am well aware that there is no generally accepted etiology of peptic ulcer and as there is no generally accepted proof, I retain my right to speculate upon this problem. I continue to think of the chronic ulcer as a condition of infection. Focal infection with systemic toxic effects and embolic phenomena offer the most logical explanation of the acute ulcer. Clinical experience and the experimental data offered by Rosenow[1] and recently by Hayden,[2] point to the likelihood of causal relationship of oral and naso-pharyngeal infections to acute gastric and duodenal ulcers and acute exacerbations in the chronic ulcer. It is well recognized that other abdominal organs are frequently simultaneously affected. Those infections in the appendix and gall-bladder may have a common etiology with the ulcer or may possibly have an etiological relationship, either in the production of the original ulcer or in preventing its healing. It is significant that Balfour[3] in reviewing the results of one thousand gastroenterostomies found most of the failures among 125 cases in which the appendix was not removed.

The question, do free hydrochloric acid and peptic activity have to do with the chronicity of ulcer, has not been solved. Some of the best known gastroenterologists of this country state that acid has little or nothing to do with our problem. Two of the greatest surgeons of all time, Mayo and Moynihan, are very positive in their statements that acid is an active factor in maintaining the chronic ulcer. It is well known that the ulcer may exist in the absence of free hydrochloric acid. This ulcer may have had its beginning, however, in the presence of acid. The absence of acid in such a case only implies that in this particular ulcer acid is not definitely responsible for the failure of the ulcer to heal. A review of our own cases and those reported by several large clinics show that about 83 per cent of all ulcers occur in the first or acid portion of the duodenum and nearly three-fourths of the gastric ulcers are situated near or at the pylorus. We also recognize that the marginal or gastrojejunal ulcers occur most frequently when the acid is most concentrated in the gastric juice.

I am not defending any special type of nonsurgical treatment nor offering comparisons between the various medical managements. Nor is the purpose of this paper to compare the results or the advantages of either surgical or medical treatment. Rather, it is my intention to emphasize that each case demands the most accurate study with the mode of attack planned not by formula, but determined by a careful consideration of the individual problem.

In those cases treated for ulcer in the medical department at the University of Iowa, the methods employed have been chiefly dietary with frequent feedings, and the use of alkaline powders at frequent intervals. The majority of the patients have undergone the usual Sippy routine

with modifications in some cases, as found necessary. All of those patients treated by me personally have been placed upon the detailed routine of the Sippy management unless complications or something unusual in their condition required modification. In some instances the presence of pulmonary tuberculosis, diabetes, chronic nephritis, or disagreeable features attributable to alkalosis have required variations from this routine. Again I must emphasize that the patient must be considered as a whole.

There are several types of management, such as the Einhorn, the Smithies, and the Coleman routine, which are admirable in principle. Rarely has the Sippy treatment failed to bring prompt relief of all symptoms. Unless we realize that the chronic duodenal or gastric ulcer requires months to heal any medical management is likely to fail. Most patients, and too many physicians, are satisfied with a relief of the immediate attack. Ivy[4] stated several years ago that in dogs acute ulcers, even when removed from the flow of gastric juice and acid chyme but traumatized for a short period once a day required from thirty to fifty-two days to heal. Moynihan[5] reports cases of gastric ulcer in which gastroenterostomy and jejunostomy were performed for irremovable ulcer. He finds that from six months to three and three-quarters years has been required for some of these ulcers to heal when no smallest quantity of food, solid or liquid, is given by the mouth. How long does it take for a given ulcer to heal under any particular management? I do not know. If the long view is taken our efforts must continue until that ulcer is completely healed. With the intelligent patient the entire situation should be discussed. His prolonged management should be planned with him to provide for the maximal efficiency of both patient and treatment.

Certainly there are reasons for the internist to consider the danger, the failures, and the benefits to be offered by surgery in general and by the surgeon with whom he is associated in particular, not from the standpoint of adverse criticism but with the aim of hearty cooperation. The end results of surgery have been analyzed much more frequently and with greater accuracy than have those of medicine. Especially valuable contributions are the reports of Moynihan,[5] Balfour,[3] Scudder,[6] Poole and Dineen,[7] Peck,[8] Deaver,[9] and Crile.[10] The end results in those patients surviving the operation are not very widely different in these various series. I know of no other surgeon than Moynihan who states he has operated upon over 500 consecutive cases of duodenal ulcer without a death. The operative mortality of well trained and careful general surgeons, men with more than average ability as well as reputation, is far in excess of that reported by Moynihan or by Balfour, both of whom give an average mortality of one to two per cent. At the meeting of the American Surgical Society in 1922, in a symposium on end results of surgical treatment of gastric and duodenal ulcers, Scudder, Peck and Poole rather frankly stated their own end results in groups of unselected cases, presumably comparable with those which we see at the University Hospital at Iowa City.

The average mortality was 8.16 per cent in a total of 450 cases.

The table gives their individual results:

TABLE I

End Results—Scudder, Poole and Peck

	Operated	Mortality		Followed		Total Failure
		Cases	%	Failed	%	%
Scudder	310	21	6.7	15	7.47	14.12
Poole	70	6	9.57	9	15.3	23.87
Peck	110	13	11.8	6	7.89	19.69
Average			8.6%		8.64%	17.2%

(347 cases followed. Success, 82.8%)

For the purpose of estimating the results of medical and surgical treatment at the University Hospital I have reviewed the records of each service for a five year period—1919 to 1924. I have not made any especial effort thus far to determine the end results of those cases treated in the surgical department except when the patient was transferred from the medical department for surgical treatment.

TABLE II

Results of Surgery, 1919-1924

GASTRIC ULCERS		15
DUODENAL ULCERS		74
GASTRIC AND DUODENAL ULCERS		2
GASTRO JEJUNAL ULCER		1
SURGICALLY TREATED		92
SEVEN DEATHS		7.6%
In three cases the medical diagnosis was incorrect.		
PERFORATING ULCERS		17
Gastric	5	
Duodenal	12	
ACUTE PERFORATIONS		3
Gastric	1	
Duodenal	2	

TABLE III

Operations

GASTROENTEROSTOMY		44
Gastroenterostomy and Appendectomy	21	
Gastroenterostomy and Cholecystectomy	4	
Gastroenterostomy, Appendectomy and Cholecystectomy	7	..
MORE THAN THE ULCER TREATED (34.7%)		32
Gastroenterostomy and Resection of the Ulcer	4	4
Gastroenterostomy and Balfour Operation	4	4
Division of Stomach and Gastroenterostomy	2	2
Gastroenterostomy the Second Time	1	1
Resection Only	1	
Simple Closure	3	
Ulcer Itself Treated	14	
TOTAL GASTROENTEROSTOMIES		87
Jejunostomy	1	Operated twice 1
Gastroenterostomy undone	1	Operated three times ..

TABLE IV

End Results—Twenty-Three Cases Referred to Surgery

Complete Success	18	78.3%
Questionable Success	3	13.0%
Failures	2	8.7%

	Success	Questionable Success	Failure
Duodenal (17)	13	3	1
Gastric (4)	3	0	1
Gastric and Duodenal (2)	2	0	0

In all of the cases in which there was failure or doubtful success there was no obstruction. The three patients who have had questionable cure of their ulcers followed no post-operative medical treatment. They continue to have digestive trouble though somewhat modified by their operations. If the ulcer is not removed by the surgeon the post-operative treatment should include a careful medical management.

In the cooperative management much may be done by the physician in preoperative treatment, especially in those cases with obstruction, hemorrhage, and dehydration. At the University Hospital, those principles of preoperative treatment described by Berkman[11] and by Balfour[12] for cases of pyloric obstruction have been practiced. There is no doubt that such measures lessen the mortality in these difficult cases.

The physician, even more than the surgeon, has been relying upon impressions rather than upon an exact knowledge of the end results in those cases which he has treated. The only careful review of the end results of medical management which I recall is that of Eggleston[13] of Battle Creek. Personally, I am very sorry that the late Dr. B. W. Sippy never reported the end results of his own treatment as ascertained by a follow-up system. From private patients it is much easier to secure answers to questionnaires or letters of inquiry than it is from our clinical and charity cases. I have chosen to include the results obtained in cases which have not been treated within a year, and have used a five year period for investigation. Letters were addressed to 280 patients. I have received only 120 answers and twenty letters have been returned. This would seem to indicate that half of our patients are not sufficiently interested or cooperative to answer my questions.

I have not found it possible to divide the end results into two groups, the one representing success and the other failure. Of the 120 reports, four indicated that the diagnosis of ulcer was incorrect and one patient who had advanced cardiac disease at the time of his admission died from heart failure. There remain ninety-two cases treated medically in whom we have some indication of the results of therapy.

Forty-eight patients, or 52.2 per cent, have been absolutely free from all digestive trouble since their treatment was begun. Of these individuals, ten had gastric ulcers and thirty-eight duodenal ulcers. The average duration of symptoms had been five and a half years. Eighteen gave histories indicative of ulcers lasting three years or less. Eight patients had had symptoms over twelve years and one patient had a characteristic history of thirty-five years duration. The average duration of their careful dietary and alkali therapy was well over twelve months. Five of the less chronic cases apparently obtained cure by medical treatment lasting two to three months.

The next group consists of eleven patients who consider themselves cured and probably are cured. These patients, however, mention some slight digestive disturbances. Most of this group are decidedly neurotic. All of these patients had duodenal ulcers. The average duration of symptoms was eight years and the longest course was twenty-one years. In two instances associated cholecystitis was diagnosed. The average duration of treatment was ten months and the shortest was six weeks of strict Sippy management followed by several months of a modified management.

The third group, thirteen cases, report that they have some digestive disturbances from time to time. They themselves feel that they have obtained a fair degree of success, chiefly in the way of relief from distress. Personally, I anticipate that some of them may have a recurrence of definite ulcer symptoms or complications, at least there is considerable possibility that the ulcer persists. The symptoms which these people mention can be attributed to various causes—to alcoholic gastritis in one, to migraine in two; to a catarrhal colitis in one, to chronic constipation in two, and the reports also indicate that gastric neurosis may be present in all of the group. All of these patients had duodenal ulcers. One patient had an additional diagnosis of probable cholecystitis. In this group of cases the average duration of the treatment was about four months. The longest period of treatment was nine months and the shortest was two months. One patient has mild pulmonary tuberculosis.

The next group includes eleven patients who have symptoms which I consider as probably due to persistence of an ulcer. These patients state that they must be careful in eating and some mention that now and then they resume the treatment originally prescribed. Three of this group probably have cholecystitis and surgery was advised at the time of their hospitalization. It is possible that their symptoms are due to gall-bladder dis-

ease or that the gall-bladder condition interferes with the healing of an ulcer. One patient has very severe migraine. One patient has latent syphilis. Another factor which probaly interfered with success was dilatation of the stomach and delayed emptying in two cases. The treatment was carried out for only a few weeks by four of these patients.

The last group consists of nine cases, one gastric and eight duodenal ulcers in which our efforts with medical management apparently completely failed. Two of these patients have had hemorrhages since they left the hospital and one of these two had a perforation. Both of these patients were ideally faithful to their management. One patient after four years developed a gastric carcinoma. Five patients have not obtained symptomatic relief for any considerable time and none of these made any effort to adhere to the instructions given for more than two months. In addition, cholecystitis was diagnosed in four of this group and chronic appendicitis in one. In three patients there was delayed emptying and to two of these surgery was recommended.

In summary, forty-eight of the ninety-two patients treated non-surgically, or 52.2 per cent seem certainly cured. Two other groups of thirteen and eleven patients, though less certainly cured, have fairly satisfactory results. This gives a total of seventy-two cases or 78.3 per cent of success from medical treatment. There are nine undoubted failures and eleven probable failures, twenty cases or 21.7 per cent unsuccessful. It is evident that the greater the degree of failure, the shorter was the average period of therapy. It is also seen that in the unsuccessful groups there were many more patients who should have resorted to surgery, either for the ulcer itself or for associated cholecystitis or appendicitis.

TABLE V

Medically Treated Cases (92)

	Cases	%	Average Duration	Chronic Cholecystitis	Chronic Appendicitis	Complications %
1. Cured	48	52.8	5.5 yrs.	3	2	10
2. Probably cured	11	12.0	8 yrs.	2	0	18
3. Improved, (possibly cured)	13	14.1	8.3 yrs.	1	0	7.5
Total	72	78.3%				
4. Probably not cured	11	12	3 yrs.	3	1	36.3
5. Failures	9	9.7	(?) 8 yrs.	4	1	55.5
Total	20	21.7%				

There are a few factors which surely have to do with the healing of an ulcer. Any known etiology should be removed. Apart from actual removal of the ulcer all other direct treatment aims to produce physiological rest. To remove mechanical and chemical irritation, to lessen the work of the stomach and prolonged protective management are the essential indications for gastroenterostomy and the various medical procedures. Symptomatic relief is readily obtained and no doubt some degree of healing occurs within a few weeks after any of the well known treatments are instituted. Long periods of quiescence or absence of symptoms are in favor of partial healing. Clinically the complications of hemorrhage, perforation, and obstruction, more frequently occur after at least a short period of active symptoms in the form of the usual distress. I believe the reason for most medical failures is the short duration of any treatment employed. The principles of the treatment may be admirable, but either too difficult to carry out or impractical to follow long enough to secure complete healing.

It would require too long to discuss the various indications for surgery, some of which may be classed as absolute and some as relative. What can surgery accomplish better and with less risk in each individual case? As early as possible the physician should determine how cooperative his patient is likely to be. The economic situation must be thoughtfully studied. The social and financial status of many of our patients renders an accurate and prolonged medical management impractical if not impossible. An acute ulcer should heal more quickly than a chronic ulcer and chronicity of the ulcer becomes a relative indication for surgery.

The members of the surgical department have been very kind to us in showing us the living pathology at the operating table. Our mistakes in diagnosis may hurt our pride, but spur us on to a more careful clinical study in the succeeding cases. I quote from Moynihan: "I think it is a reproach to medicine that the surgeon should be compelled to operate so frequently for gastric and duodenal diseases. Such ulcers ought surely to be cured, far more often than they are, by medical treatment. Physicians who acquaint themselves with the pathology of a living gastric or duodenal ulcer realize how protracted and how scrupulous the medical treatment of so grave a lesion must necessarily be. If the practice of a few physicians became the custom for all, then perhaps we might find a way of escape from the grave disadvantages which result from the so frequent divorce of mind from hand in medicine."

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Discussion

Dr. Charles J. Rowan, Iowa City—The department of surgery of Iowa University has benefited very greatly from the thorough cooperation which we have had from Dr. Gatewood. We are very fortunate, in that both Dr. Gatewood and I see these conditions through the same glass. His ideas as to the treatment of peptic ulcer coincide very closely with the idea of the surgical department, and since we have been working together there is no question but that our results show a corresponding betterment. Taking it altogether, of ocurse, the results are not as encouraging probably as they should be. Because of the number of failures to secure results from gastroenterostomy, there is a tendency today to do more radical operation. On the other hand, the statistics show that approximately 90 per cent of successful end results are obtained from gastroenterostomy, and I think we should hesitate to advocate more severe operations if the mortality is going to be increased by them. Now, a thing that is not generally considered in recommending surgery to a patient with peptic ulcer is the fact that the mortality is greater than the best known statistics would seem to indicate. When we tell a patient that he should be operated and he says, "If I am operated on is there any special danger in this operation?"—it is not fair for us to say—The danger is between one and two per cent. It is not fair, because the danger is greater in our hands than it is in the hands of men who are reporting a mortality of between one and two per cent, namely, Moynihan and Mayo. I attended the meeting of the American Surgical Association, where papers on this subject were presented, and I was surprised to hear men who work in the best hospitals and with the best staff available, report that their mortality in doing simple gastroenterostomy was between 8 per cent and 10 per cent. I felt that my mortality was not nearly that high, and then, upon looking up our mortality statistics in these cases I found that it was approximately that of these other men, as Dr. Gatewood has shown. Therefore it is not fair for us in considering the value of medical management as compared with surgical treatment, to assume that the mortality will be only one or two per cent, unless by long continued cooperation and endeavoring always to cut down our mortality and trying to find out what the cause of it is, we are able to reduce it. If in doing simple gastroenterostomy we are having a mortality of between 8 per cent and 10 per cent, we are probably going to have a higher percentage where the operation increases in severity. We now see men who are condemning gastroenterostomy and advocating more radical procedures when the results are 80 to 90 per cent cures. Some men are now speaking of gastroenterostomy as a disease. Well, certainly gastroenterostomy does not leave a normal condition. However, this means that, realizing the condition, we should recognize the great importance of carrying on, after operation, just as before a careful medical management, and that is what we have done in the past. But we are going to be more careful in future to carry on the treatment of the patient who has been operated on for peptic ulcer just the same as though he had not been operated, knowing that the operation is just an aid to cure. Another point: I believe that a great many of the cases come finally to operation because their first medical management has not been in any way sufficient. We have coming into the hospital patient after patient who say—yes, I have been treated, I had the Sippy treatment, and some tell how many times they have had the Sippy treatment. Inquiring into the matter, we find that no attempt has been made to give a real Sippy treatment or a sufficiently rigid medical treatment of any kind, the patient not even put to bed. The harm is that while they will to a certain extent respond to an inadequate medical management, they will not get the case cured. The ulcer may be quieted for a while, but recurrence is almost inevitable, and in the course of months and certainly in the course of years a condition develops which makes it impossible for the ulcer any longer to respond to medical management, whereas in the first place a proper medical management would have been successful. And, as Dr. Gatewood has pointed out, the very fact that these patients have undergone a long course of therapy before the proper indications for treatment have been found, should suggest to us that if so much can be obtained by medical management after an ulcer has lasted for years, certainly if the ulcer were properly handled in the first place the results of medical management would be much more worth while. So in respect to these cases I feel something as I do regarding some cases of goiter—that peptic ulcer is primarily a medical condition. But while in the cases that finally do come to surgery the mortality is higher than it should be and probably higher than it will be in the future, nevertheless in a good many of the cases we obtain the most gratifying results that we have in any form of surgery.

Dr. John H. Chittum, Wapello—I feel that it is not fair to Dr. Rowan and Dr. Gatewood to compare statistics from the Iowa State Hospital with those of such hospitals as the Mayo Clinic, Johns Hopkins, etc., because of the material they have to work upon. The State Hospital has some good cases, it has a great many selected cases, by which I mean that they are the "huskies" of the state of Iowa both as to a fine physique to give them the necessary resistance and also the mental capacity to fit them for receiving pre-hospital treatment and the after care. As Dr. Rowan has suggested, many of those patients have had practically no care until they go to the hospital, and just the same kind of care after they return to their homes. We have known of a number of cases that have improved wonderfully while they were in the hospital under Dr. Gatewood's care, but when they leave the hospital they go to home surroundings that are not fit for a human being, and they haven't the facilities for carrying out proper dietetic care or any of the other required measures. So I think Dr. Gatewood is to be complimented upon the reports showing what he has accomplished against such handicaps. And their handicaps are similar to ours in the country, although some of our patients cooperate in the after care better than do some of Dr. Gatewood's patients after they leave the hospital. Dr. Rowan spoke of comparing his statistics with those of the Mayo Clinic and some of the other hospitals. I think the Doctor is to be complimented because he has done so well with the material he has had.

Dr. Gatewood—I wish to add that it would seem to me we might improve our results possibly by a more painstaking effort in our diagnosis and in our advice concerning surgery. In other words, as you will see from our tables, there are some cases that have failed to respond, probably only because there was associated disease which surely should have been treated surgically. Likewise, there were some of the cases in the last group which certainly should have been referred to the surgical department at the time that medical treatment by us began. Some of them were so advised and refused operation. We realize that strict medical management is very difficult to enforce. Of the patients I have seen, it comes to my mind that seven of them were physicians, and of these, one patient came through his treatment with success due to his cooperation, while, to my astonishment, six of them failed in the management of their cases.

DOCTOR ALDO CASTELLANI

Doctor Aldo Castellani has been appointed to the head of the School of Tropical Medicine at Tulane University, New Orleans. Dr. Castellani has for several years been employed by the several governments of Europe to investigate certain serious tropical outbreaks of disease. He therefore comes to Tulane well prepared for his duties as head of the School of Tropical Medicine.

SOME SURGICAL CONDITIONS FOUND IN THE LOWER ABDOMEN*

M. J. McGRANE, M.D., New Hampton

If the entire field were covered, much might be said concerning surgical conditions found in the lower abdomen. What I shall say will be in reference to a number of cases from my records: The first three are cases of ovarian cyst with twisted pedicles, the fourth, ovarian cyst complicated with pyosalpinx, and the fifth, perforation of the intestine by a fragment of chicken bone.

Case 1. Miss M. P., age seventeen.—I was called to see her August 31, 1920, late in the evening. She was having quite severe spasmodic pain in the lower abdomen, particularly on the left side. She had vomited several times, temperature normal. Muscular rigidity and tenderness were present but not marked. On bimanual examination, a mass could be felt in the left ovarian region. Next morning I saw her again. The pain was more severe and generalized over the lower abdomen. There was definite tenderness over the appendix and the temperature had gone up to 100 F. The patient was taken to the hospital where a leucocyte count of 16,000 was found. Examination of the urine showed nothing abnormal. My diagnosis was "acute appendicitis and ovarian cyst". Patient consented to immediate operation. It must be confessed that I was guessing to a certain extent, but, I learned early in my short career that it is much easier to get permission to operate in acute cases if the patient and relatives think you know what you are talking about. A median incision was employed. The mass felt in the left side was an ovarian cyst about as large as a medium sized orange. It was very black and the pedicle twisted three or four times. The tube was also twisted in with the pedicle and had to be removed with the cyst. The right ovary was cystic and about two-thirds of it was resected.

The appendix was subacutely inflamed and therefore removed. An interesting result in this case is that this girl has menstruated regularly since the operation. Before she was operated on, her periods were irregular and painful.

Case 2. Mrs. P. R., age fifty-six—I was called at two o'clock in the morning on February 26, 1925. Spasmodic pain came on suddenly in the lower right quadrant followed by vomiting. Pain was referred down the inner side of thigh. There was right rectus rigidity and tenderness, no frequency of urination. Catheterized specimen was negative for blood and bacteria. I called to see her again about noon the same day and found her quite comfortable. About six o'clock in the evening of the same day they called me again saying the pain was worse. When I saw her this time I made a diagnosis of acute appendicitis and advised immediate operation. When

*Read before the Mid-Summer Meeting of the Austin Flint-Cedar Valley Medical Society, New Hampton, Iowa, July 7, 8, 1925.

we arrived at the hospital the leucocytic count was 20,000. The abdomen was by this time very tender and slightly distended.

Right rectus incision was made and when the appendix was brought out it looked quite innocent except that it was rather long and was therefore removed. Pelvic exploration revealed a prolapsed cyst of the right ovary with a long twisted pedicle. It was wedged down deep in the pelvis between the uterus and rectum, but not adherent.

Case 3. Mrs. B. H., age thirty-nine, mother of four children, had one miscarriage. Youngest child had been recently weaned. She had one menstrual flow since weaning the baby.

Present illness began with sudden onset of pain in the lower right quadrant. Pain was referred to the back and was followed by nausea and vomiting.

The character of pain indicated a stone in the right ureter although there was no frequency. A catheterized specimen of urine contained no blood. This attack occurred May 8, 1925, lasting only a short time. Two days later the pain returned with such severity as to require morphine. She was taken to the hospital for cystoscopic examination. There was no evidence of stone as the catheter passed to the right kidney without obstruction. A plain plate showed no shadows and a pyelogram showed a normal kidney pelvis. On bimanual examination a mass about the size of a three months pregnancy was found occupying the center of the pelvis. She had a leucocyte count of 8,600. On account of the location of the pain and tenderness and the negative cystoscopic findings, I made a diagnosis of appendiceal colic. She consented to operation with this diagnosis.

A median incision was made. A very small inoffensive appendix was found. The mass which I thought might be a pregnant uterus was a cyst of the right ovary with a twisted pedicle. Both appendix and cyst were removed.

Case 4. Miss V. V., age thirty-eight, had been married, but recently divorced. Had never been pregnant. For several years had frequent attacks of pain in the lower abdomen. Also, considerable bladder irritation. She came to my office July 25, 1925, complaining of frequent urination with burning. She informed me that about a week before while in another city she was taken very suddenly with severe pain in the left side. A doctor was called who said that a stone was passing from the kidney. He gave her a hypodermic which relieved the pain but the soreness and bladder irritation persisted. The urine contained many pus cells and colon bacilli. There was marked tenderness and muscular rigidity in the lower left quadrant. I advised her to enter the hospital for cystoscopic examination which she did a few days later.

Cystoscopic report: The cystoscope was introduced with difficulty on account of obstruction within the bladder. Only by depressing the occular end would it pass. The entire bladder mucus membrane was highly congested. The posterior wall and base were pushed in to such an extent as almost to bisect the lumen from behind forward and below upward. It appeared on first sight like a smooth tumor growing within the bladder wall. The ureters were found with some difficulty and catheterized but no blood, pus or bacteria were found coming from either kidney. On bimanual examination a large tender mass could be felt occupying a position to the left and posterior to the uterus. The leucocyte count was 17,000, temperature was 100 F. Being in a position to know that she had a multiplicity of questionable admirers I made a diagnosis of pyosalpinx with a possibility of an ovarian cyst. She was kept in bed, heat applied to the abdomen, sterile milk injections were given and the bladder was irrigated daily with boric solution. At the end of a week the leucocyte count had reduced to 9,000. There was no pain, and the tenderness had practically disappeared. A second cystoscopic examination was now made. The cystitis had nearly all cleared up, but the same bladder deformity remained. She consented to an exploratory operation.

An incision was made through the lower end of the left rectus. A cyst of the left ovary about the size of a large grape fruit was found. It was adherent to the broad ligament and other surrounding structures. The tube was very much thickened, red and adherent to the cyst. In separating the cyst from its adhesions at the base, it perforated and discharged its contents which were evidently not very septic because there was no marked postoperative evidence of peritonitis. In this case the cause of the bladder deformity was undoubtedly the cyst pressing the uterus forward against the bladder wall.

Case 5. Mrs. K. S.—I was called to see the patient August 21, 1920. She had been having pain in the lower right quadrant for about thirty-six hours. Right rectus rigidity and tenderness were marked. Patient had vomited. Diagnosis was acute appendicitis. She was taken to the hospital and operated on at once. A right rectus incision was used. I was disappointed to find a normal appearing appendix. Having in mind Meckel's diverticulum or some other lesion the ilium was drawn out and in so doing my hand touched upon a sharp object projecting from the bowel about six inches from the ilio-cecal valve. When the bowel was inspected there were two sharp points protruding on opposite sides. Each perforation had a small area of localized peritonitis surrounding it. One of the perforations was enlarged and the object withdrawn. Each end was very sharp, it was about one and one-half inches long and looked like a fragment from the breast bone of a chicken. A few days later I asked the patient when she had eaten chicken last and she said, "About three days before she became sick".

In closing I wish to kindly ask your pardon for reporting the above cases in seemingly unnecessary detail but my purpose in doing so is to bring out the point that the diagnosis of acute abdominal conditions is not always easy.

INCIDENCE OF MECKEL'S DIVERTICULUM*

R. C. COLEMAN, M.D., Estherville

Early in my surgical training I was impressed by the seriousness and difficulties in diagnosing the condition known as Meckel's diverticulum so I have been very careful in my observation of this condition and have collected eighteen cases in approximately one thousand laparotomies.

In discussing this subject I feel that our percentage of 1.8, which is from the surgical standpoint only, is rather high as compared to the post-mortem findings, as in a great number of our cases, due to infection and other causes, we have been unable to explore for this condition without endangering the patient, hence some incidences of this condition may have been overlooked.

As to embryology and pathology, I have not taken this into consideration, as you are all well aware that generally speaking this condition is the failure of complete obliteration of the umphalomesenteric duct. While most authorities consider the most common result of this is a direct communication from intestine to umbilicus, either patent or not patent at umbilicus, I wish to state that of all our eighteen cases we never had an incidence of this, but all of our cases were typical Meckel's diverticulæ without attachment to umbilicus.

The incidence of Meckel's diverticulum from autopsy records is variously given from one to three per cent, or approximately an average of 1½ to 2 per cent, but one can hardly compare surgical records and pathological records, as oftimes surgical cases for various reasons cannot be explored in safety to the patient for this condition.

Quoting International Clinics for 1925, which is a fair average of this condition from autopsy records, they give the following results.

One series of 6,670 autopsies this condition was found 104 times or 1.5 per cent.

Another series of 13,068 autopsies this condition was found thirty-nine times or 3 per cent.

Adami in all of his records gives the incidence as 2.7 per cent.

Dr. Lewis Mitchell, Chicago, in 1,635 autopsies found the condition present thirty-nine times or 2.25 per cent.

Balfour, reporting from the Mayo Clinic in 10,600 laparotomies, found the condition present fifteen times or .14 per cent.

From the surgical standpoint this condition may be referred to under one of three heads namely:

No. 1. Patent Duct to Umbilicus.
No. 2. Intestinal Obstruction.
No. 3. Diverticulitis.

No. 1 above, that is, patent duct to umbilicus, we may exclude from our paper by saying that the diagnosis is either made by the presence of an umbilical polyp or a sinus connected with bowel, or there may not be a connection with bowel, giving us a sinus discharging mucus material only. As regards treatment of this condition it may all be summed up by saying that any temporizing treatment is dangerous and the entire tract should be removed its entire length.

As regards No. 2, that is, the intestinal obstructive type, which makes up by far the greater number of cases. The symptoms vary depending upon the stage to which the condition has advanced, and is invariably followed by No. 3, that is, diverticulitis, which adds the picture of peritonitis to that of an obstruction.

Halstead states that no symptom or any group of symptoms apply to or are of much help in diagnosis. The symptoms usually given are pain, muscular rigidity, fever, leucocytosis and vomiting. At this point I might say that of all these symptoms the only one that is of any help at all, or helps to differentiate this from other acute conditions in the abdomen, is that the pain oftimes will occur for an hour or two at intervals of a few minutes, and perhaps then disappear and the patient be entirely free for several hours or longer; especially do I think this true in cases of children, or in other words, has somewhat the same character as the pain in an intussusception. The obstruction may be caused by adhesions of the diverticulum to other abdominal viscera, but usually to mesentery also, to kinking and intussusception.

As to No. 3, that is, diverticulitis, this quite often occurs as a result of foreign bodies lodging in the diverticulum, and of this kind we had one instance where an apple core was the offending foreign body.

In discussing the diagnosis of obstruction, or diverticulitis, or a Meckel's diverticulum, I wish to say that I have just one rule and that is to make it a practice in every case where a diagnosis of appendicitis has been made, and on opening the abdomen if the condition of the appendix does not account fully for the symptoms, always be sure to explore the lower three feet of ileum, and one will be surprised at the frequency with which this condition will be found; sometimes three or four within a short space of time. For example,

*Presented before the Seventy-Fourth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 13, 14, 15, 1925.

in the year 1924 I had four within six weeks and none before or after in the entire year.

Some surgeons doubt the advisability of removing all Meckel's Diverticulæ which are discovered accidently with other abdominal work, but in two of our cases the patients had had previous appendectomies with this condition overlooked, and our only death incidence was on one of these which I will discuss later.

As to operative procedure, if the intestine is gangrenous of course resection is called for. In the cases which have not reached this stage, various authors advise removal and suturing horizontally to avoid constriction of the intestine, others advise suturing longitudinally to avoid angulation. With all of our cases I have removed the diverticulum in exactly the same manner as you would remove an appendix, using the purse string method. The only thing to consider in this latter method is not to cut the stump too short so that when it is invaginated it does not angle the intestine, or diminish the size of bowel lumen. I prefer this latter method because it is more simple and less danger of contamination.

For case reports I am reporting only the more interesting, those that were found associated with other surgical conditions but not giving any special trouble I will not discuss.

Case No. 1. Female, age thirty-two, married, operated four years previous for a subacute appendix by a very good surgeon. Past medical history negative, except for one year she has had a leucorrheal discharge, specific in type. Present illness started four weeks ago with typical symptoms of a severe pelvic inflammation. Temperature 104, white count 22,000. On opening abdomen the first thing I found was a large Meckel's diverticulum. On exploring pelvis, both tubes and ovaries contained pus and formed the wall of a pelvic abscess so I decided it was best to confine our surgical work to the pelvic condition and leave the diverticulum alone. The patient made an uneventful recovery and was at home about two months when she developed severe symptoms, obstructive in type. At this time she was under the care of another doctor and he attributed her symptoms to eating fresh strawberries, onions and cucumbers, and advised the patient to try more conservative treatment which she did for three days, with the patient growing rapidly worse. On the fourth day we operated, an intestinal resection was done but the patient died from a general peritonitis. In this case the first mistake was made by the surgeon who operated for the appendix and failed to explore. Secondly, were I to see this case today I would not hesitate to remove same, because the danger is small with gonorrheal infection. In fact, since that time I have had an identical case to this where ileum was so damaged that we resected the lower two feet in the presence of gonorrheal pus and the patient made an uneventful recovery. Thirdly, this patient should have been operated again at the first sign of obstructive symptoms.

Case No. 2. Boy, age eight, father died of tuberculosis when the child was five years old and who was closely associated with the father. Boy very frail, looked the part of a glandular tubercular. The doctor who referred the case said that three times in the past ten days the boy had had obstructive symptoms lasting two or three hours but cleared up, we kept the boy in the hospital but he did not have any symptoms and intended sending him home, but because of glandular tuberculosis possibility I decided to explore the abdomen. This case occurred several years ago when we believed in purging patient before operation, and the day before his operation I gave him one ounce of castor oil with good results. To my surprise the next morning when I opened the abdomen I found an intussusception which evidently dated back several days and still greater was my surprise when I found the cause of the intussusception to be a large Meckel's diverticulum; recovery was uneventful. To this day I am unable to understand how there was any results from our laxative the day previous to operation.

Case No. 3. Boy, age five, always well, for past two weeks he was apparently normal during the day but at night intervals of colicky pain. I made a diagnosis of Meckel's diverticulum and which proved correct at operation, and I might add that this is the only case of the eighteen which was diagnosed previous to operation.

Case No. 4. Nurse, age twenty-eight, serving on case for us was taken suddenly ill but continued work for fifteen hours. She had a previous diagnosis of acute appendicular colic. Temperature 101, whites 16,000. Appendix diagnosis confirmed. At operation appendix did not account for symptoms so following our rule of exploring ileum, an acutely inflamed Meckel's diverticulum due to torsion from attachment to mesentery was found.

Case No. 5. Girl, age twenty-two, indefinite abdominal pain at left of umbilicus. Temperature 99 to 100, whites 12,000, recovered in one week. Worked two weeks and then recurrence of symptoms. Operation revealed the same condition as Case No. 4.

The remaining thirteen cases were found in our routine of examining ileum and insofar as I know had not produced any special symptoms.

Summary

No. 1. Usual case where connected with umbilicus, diagnosis is not difficult. Other cases almost impossible to make diagnosis as symptoms very similar to those of an acute appendix or intestinal obstruction.

No. 2. Therefore there is only one rule to follow, namely, in every subacute or chronic appendix explore the lower three feet of ileum as these cases if neglected result in a higher mortality than ruptured appendix, but not higher than an ordinary appendix if taken in time.

No. 3. Various methods of surgical procedures have been suggested but I think this condition may be simplified by treating in the same manner as a purse string operation for appendix.

No. 4. Our experience has been not to fear removing same even in the presence of gonorrheal inflammation of pelvis.

No. 5. From autopsy records the average number found is from 1 to 3 per cent or an average of about 1½ to 2 per cent. Balfour shows only .14 of one per cent from the surgical standpoint, therefore our record of 1.8 per cent surgically can only be explained by the fact that we have happened to have an exceptional number or else have been sufficiently attentive to find practically every case, otherwise we could not equal the autopsy records from surgical investigations.

Discussion

Dr. Charles J. Rowan, Iowa City—I am not prepared to discuss this paper because I have not observed nearly as many cases as Dr. Coleman has done. On the other hand, those that I have observed have been of great importance. I recall two cases in particular, one case that of a patient who was supposed to have an acute appendicitis, as he had a bad peritonitis in the lower abdomen. The appendix, being actually inflamed, was removed. The patient continued seriously ill and it was necessary to operate again in two days, when a gangrenous diverticulum was found. The patient died, however, simply because the diverticulum was not recognized at the first operation. In looking back on that case we realized that the history should have suggested something more than acute appendicitis, in that the pain was more colicky and the symptoms more intermittent than we usually find in acute appendicitis, which should have led to a further investigation at the time of operation in spite of the fact that the appendix was inflamed merely because it was in the region of this acute peritonitis and was no more inflamed than the surrounding tissues. Another patient that I operated on several years ago had very severe hemorrhages for a long time, and an exploratory operation was done. He was not in good condition and had to be transfused before operation. The cause of the hemorrhage was not at all certain before operation. The duodenum was examined with the idea that he might have duodenal ulcer, which was not found. The next thought was that he might have a papilloma, but naturally the large intestine was more suspected than the small intestine. No papilloma was found. The duodenum was then opened and searched and an erosion was found. The patient left the hospital in fairly good condition, but had hemorrhages, and was brought back in two months with an acute condition in the abdomen. He was operated at this time and the acute condition was found to be due to the perforation of a Meckel's diverticulum which contained a papilloma that had been causing the hemorrhages. Removal of the papilloma with the diverticulum cured the acute abdominal condition and also did away with the possibility of any future hemorrhages from that source. I would therefore say that in any acute abdominal condition where we are anxious to do not too much exploring, if we detect anything in the history which would indicate an acute appendix or a peritonitis, and if upon examination the appendix does not account for the peritonitis, we should examine for Meckel's diverticulum. However, I do not believe that a Meckel's diverticulum which is not causing symptoms should be removed simply because it is present, any more than we remove a normal appendix during the course of an abdominal operation.

Dr. William C. Newell, Ottumwa—I would like to report one case in which I was called in counsel by a very competent man. He had treated this woman in confinement three days before, she gave the history of previous attacks of abdominal pain. I looked her over and fully agreed with him that the case looked very much like appendicial trouble. We put her in the hospital. Her blood count showed almost normal, I think about 10,000 if I remember rightly. That did not account for the appendicial involvement and we decided it was a surgical belly at least, opened up and found that a Meckel's diverticulum was adherent and causing obstructive symptoms. Fortunately she recovered. As to the operation, we removed Meckel's diverticulum, did a purse-string suture and buried the stump. The last thing we thought of was Meckel's diverticulum. The first thing we had in mind was sepsis following labor and the next thing possible appendicitis because she had had previous attacks of abdominal pain. However, I think that if this case had gone on to fatal termination we would have been compelled to sign the death certificate as a death from appendicitis.

Dr. Coleman—There is just one point I might mention in closing. In routine examinations for the possible existence of Meckel's diverticulum, we have been able a number of times to check up on the dangerous error of overlooking some other condition. In several cases we have found pathological conditions which otherwise we would have overlooked. Last year we had a case of this type with a high leucocyte count, and by exploring the abdomen we found a small amount of pus near umbilicus in exploring for a Meckel's diverticulum. Just because of finding this small amount of pus we investigated further, and as we got up to a point about two feet below the stomach we detected in the bowel something that seemed like a foreign body and on opening it up we found the foreign body to be a toothpick which evidently had perforated the intestine and caused a localized peritonitis on the opposite side. I am satisfied that if we had not been looking for a Meckel's diverticulum we would not have detected this other condition. So I cannot help but feel that in any obscure abdominal condition it always pays to follow the cases up and look for the presence of a Meckel's diverticulum.

The Journal of the Iowa State Medical Society

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THE HISTORY OF SYPHILIS

One assumes a certain amount of risk in writing the history of pathologic outbreaks of 400 years ago or more. It may frequently happen that the real disease is not what it appears to be. The standard historical relation of syphilis was supposed to have first appeared in epidemic form at the siege of Naples, 1495, and have been communicated to the French invaders by the Spanish occupants, who got it (authorities conjecture) from Columbus' sailors, a visitation from the New World. This assumption is based on the presumption that there had never been an earlier epidemic outbreak. Dr. Garrison, in his History of Medicine, states that sporadic syphilis existed in antiquity and even in prehistoric times as being quite within the range of probability. Thus it will be seen that Dr. Garrison refers to the standard historical assumption as to the general historical outlook, but he modifies this statement, as we have already stated, of the probable sporadic outbreak in antiquity and even in prehistoric times.

As Sudhoff holds that the Neapolitan epidemic of 1495-1496 was an outbreak of typhoid or paratyphoid infection. Dr. Sudhoff contributes eight papers on this subject covering the period from August 7, 1495 to March 9, 1496. The value of these contributions chiefly serve the purpose of confusing the subject from an historical point of view.

Dr. Garrison says, "if Columbian in origin, malignant syphilis was perhaps the usual result of the contact of civilized and primitive races, as in the Black Lion of the Peninsular War or the syphilis of Japan, Mexico and the South Seas".

The references to syphilis by Professor Karl Sudhoff covering the period from 1495 to 1496. is rather remote so far as location is concerned, to be directly associated with the Columbian outbreak. It seems to us but fair in considering this subject from an historical point of view that we abandon the dogmatic statements that we have been inclined to make as to the real origin of the disease, but it may be said that none of these writers, including Garrison and Sudhoff, have made impossible the Neapolitan story of the origin of syphilis. Historical facts in this case, we do not believe were employed for any sinister purpose. We are obliged to confess that it never occurred to us that this subject could be of vital importance, as we did not know of any theological controversy growing out of it. We are quite sure of two facts in this connection, one is that the historical data must be at best very uncertain, and in the second place, it is unwarranted to use questionable facts to support any unfriendly contention.

THE HOSPITAL

The construction and equipment of a modern hospital in a large or small town is expensive, and to maintain a patient at one of these hospitals involves a large expenditure of money.

The question may be properly raised as to the necessity of hospitalizing so many patients. For some reason there seems to be a temptation to send an unnecessarily large number of patients to the hospital for treatment. This imposes an excessive burden on the patient and lessens the ability of the patient to pay a reasonable fee to his doctor. It is undoubtedly true that this excessive hospitalization sends many a patient to the chiropractor and osteopath. There are certain cases no doubt that should be sent to the hospital for observation and diagnostic purposes that could well be returned home for treatment. A complete outfit for diagnosis is too expensive to be duplicated by a considerable number of doctors in a given community, but could be installed in the hospital for the common service of the entire staff. When one stops to think of the cost of hospital service, of a special nurse, and of special examinations, we can readily see that a small proportion of a community can afford to be sick, and, if sick, resort to the various cults for relief at a comparatively low cost. Of course communities differ in this respect; there are some wealthy communities that

can afford to go to the hospital for all sorts of trivial complaints. There are other communities in which only a small proportion can afford to go to the hospital for treatment. It is undoubtedly true that the modern hospital idea has had the effect to increase the number of cults and to decrease what was once known as the "family doctor".

INSURANCE PAMPHLETS

We have a group of pamphlets prepared by insurance agencies which are of considerable importance to the medical profession in that they contain statistical data collected with much care for the information of insurance companies and of equal influence to the general public. One of this group bears the title of "Cancer Mortality Among Insured Wage Earners and Their Family", prepared by the Metropolitan Life Insurance Company under direction of the well-known statistician, Lewis J. Dublin.

In this group of pamphlets is included the proceedings of the nineteenth annual meeting of the Association of Life Insurance Presidents, which contain the expressions of the leading life insurance executives of the country. Life insurance has become so intimately associated with every day life that what is said by the presidents of insurance companies should be read with great care. Probably of all the public agencies nothing goes further in its welfare relations than life insurance. Life insurance executives have directed the working out of plans to meet nearly all conditions of life. It is quite different in these days for men to save an estate sufficient to care for a family without its being supplemented by life insurance.

MALPRACTICE DEFENSE

The Boston Medical and Surgical Journal makes certain comments on a report presented by the Massachusetts State Medical Society Council on Malpractice Defense.

"Dr. W. C. Woodward, executive secretary of the Bureau of Legal Medical and Legislation of the American Medical Association, as reported in the House of Delegates last May. He had received reports on malpractice defense from fifteen of the thirty-two state medical societies of the country that furnish such defense at the present time. In 1918 the number of such societies was twenty-five. Now defense is provided by all of the societies of the New England states, except Rhode Island, and it is furnished by the neighboring states of New York, New Jersey and Pennsylvania — by thirty-two of the forty-eight states.

"Many of our Fellows still feel that commercial insurance will relieve them of anxiety better than malpractice defense, notwithstanding that we have been told more than once by the lawyers that, in their judgment, commercial insurance has increased the number of suits for malpractice in the courts because, in most instances, the plaintiff may count on receiving some money in settlement from an insurance company. Almost always it costs less to settle than to fight. It has been the policy of the Society to fight all cases in which there has been a reasonable chance of success in obtaining a verdict or a non-suit. Unfortunately the cases of true malpractice defense, namely the blackmail suits, have been outnumbered by those in which the Fellow who has been threatened or sued, has been careless or negligent in his treatment. For instance: A Fellow of the Society has seen an injury where fracture might be suspected; he has treated the patient for a sprain; has had no x-ray taken; later the patient has drifted into other hands, and an x-ray proved the presence of a fracture. Juries are sure to award damages in such circumstances. A settlement, on the best terms obtainable, is indicated, and so it is if a practitioner has been so inadvertent as to shut up in the abdomen a sponge, forceps or towel. No one, be he ever so eloquent, can persuade twelve good men and true that the foreign body was placed there by the Lord."

FINANCIAL ABILITY OF MEDICAL STUDENTS

The action recently taken by Yale University, while not altogether democratic, is wise. Of course it will bar some worthy young men from the University. The student who is obliged to divide his time between earning money to pay his way and his medical school work, is placed at a serious disadvantage both now and in the future, unless he is a man of unusual ability.

The Yale University School of Medicine has recently adopted the policy of inquiring in detail concerning the financial status of students when they apply for admission to the school and refusing admission unless the school can personally assist them financially, through scholarship or loan fund, or unless they have made such adjustments that will liberate practically all of their time to intensive school work during the academic year.

LIFE INSURANCE WITHOUT MEDICAL EXAMINATION

Dr. J. O. Segura of Jackson, Mississippi, lays the blame of insurance companies issuing policies without medical examination on the medical examiner, from two points of view. One is the delay in securing an examination, that the medical examiner for one reason or another delays the examination until the applicant for insurance changes his mind. Another reason given is the carelessness of the medical examiner in filling out the blanks. It is said that as many as ten omissions and mistakes appear in a single blank, which leads the home office to feel that there is but little security in the ordinary medical examination. The doctor, in his paper published in the New Orleans Medical and Surgical Journal, urges upon the medical examiners of the insurance companies greater care and promptness in conducting medical examinations.

CIRCULATION OF THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

Iowa	2374	Oklahoma	2
California	15	New Mexico	1
Kansas	2	Pennsylvania	11
South Dakota	3	Michigan	4
Connecticut	2	Wisconsin	5
Arkansas	2	Massachusetts	4
Mississippi	1	New Jersey	5
Louisiana	1	Maryland	3
Greece	1	Washington, D. C.	3
Kentucky	1	Ohio	4
South Carolina	2	Argentine, S. Amer.	2
Georgia	1	West Virginia	1
Maine	1	Virginia	2
Florida	1	Texas	1
Colorado	6	New York	26
Illinois	50	Washington	3
Minnesota	11	Long Island	1
Nebraska	12	Hawaii	1
Indiana	7	Canada	1
Missouri	12	North Dakota	2
Arizona	2	Tennessee	1
Alabama	1	North Carolina	1
Porto Rico	1	Panama	2
Philippine Island	3	Oregon	1
China	1		
		Total	2600

THE MEDICAL ART STRUCTURE, BURLINGTON

We have been interested in the construction of the headquarters building for doctors and dentists in Burlington, and note in a recent number of the Burlington Gazette that the building is making satisfactory progress.

PANAMA CANAL ZONE

The chief health officer of the Panama Canal reported for the calendar year 1924 a death rate in the Canal Zone of 9.05 per thousand. The death rate for disease alone was 8.01 as compared with 7.14 for 1923 and 7.08 for 1922. The death rate from tuberculosis was 1.01, as compared with 0.69 for 1923 and 0.74 for 1922. Tuberculosis caused 13 per cent of all the deaths from disease during the year. The average population of the Canal Zone during the year was 33,723. The death rate among children under one year of age, from all causes, based on the number of live births reported, was 96.54. Of the total deaths for all ages, 37 per cent were among children under five years of age. The admission rate of employes of the Canal Zone for malaria was 16 per thousand. There has been a practically constant residual rate for this disease during the last nine years, the only marked deviation being a rise to 31 per thousand in 1919, which was explained by the importation of many native Panaman laborers into the zone to take the place of the West Indian employes who were on strike. Much of the malaria developing in the Canal Zone during the year was contracted outside the sanitated areas, as it has been in the past. There has been no slackening of efforts to reduce mosquito breeding. It has been found advisable to keep under mosquito control the entire shore line of Miraflores Lake and its arms, which is over twenty-five miles in extent. A practicable method has been found in the use of "oiling boats", from which heated oil is sprayed on the grassy margins with a crew of three men at a cost of less than $250 a month for labor and materials. The oil is heated only to enable it to pass readily through the nozzle of the pump in a fine spray. Some large streams are being straightened in the vicinity of Corozal, and the bottoms lined with concrete. East of the Coco Solo River the army is draining swamps and streams for from one to two miles beyond the army and navy stations east of Manzanilla Bay. Mosquito control work in the Republic of Panama, adjacent to Panama City, was placed under the direct supervision of the assistant chief health officer in October, 1924, this centralizing under one head all field antimosquito work carried out by the health department on the isthmus. All dairy herds supplying milk to the City of Panama and the Canal Zone were given tuberculin tests during the year, and of the 2,000 cows tested 103 were destroyed. Portmortem examination of these animals showed that in only a few instances had the disease advanced sufficiently to make the milk dangerous. Dairies were regularly inspected to insure cleanliness. The entire supply of the Canal Zone and the cities of Panama and Colon was pasteurized before being delivered to customers. None of the more dangerous and destructive animal diseases exist on the Isthmus now, anthrax not having occurred in cattle for about two years. Contagious abortion in cattle, which was present several years ago, has disappeared. Col. Weston P. Chamberlain, M.C., U. S. Army, became

chief health officer, and Major Tom S. Mebane, superintendent of the Colon Hospital, in June, 1924. The personnel of Santa Tomas Hospital, Panama, ceased to be under the jurisdiction of the Panama Canal, September 1, 1924.

DUTIES OF PHYSICIANS AND SURGEONS—AS TO SUBSTITUTES

(Nash vs. Royster [N. C.], 127 S. E. R. 356)

The supreme court of North Carolina, in ordering a new trial after the plaintiff had obtained a judgment, says that, the plaintiff having a swelling above her left knee, the defendant made an incision, removed the pus, and put in a small drain. That night he left the city for about two weeks. The knee joint became affected, and, on the eighth day after the defendant operated, an operation was performed, for purulent arthritis, by two other surgeons, one of whom the defendant said he told the plaintiff's parents would look after the patient while he was away, which that surgeon and another corroborated, but which was denied by the plaintiff's evidence. Damages were awarded by the jury on the theory that the defendant had negligently left the case, which resulted in injury, or that the substitute surgeon had negligently delayed the second operation, thereby producing harmful results for which the defendant was responsible.

The supreme court thinks that the trial court erred in holding, as a matter of law, that the relation of principal and agent, between the defendant and the surgeon who was to look after the patient, necessarily followed from what took place unless the arrangement had been consented to by the plaintiff or her parents. Whether an agency in fact had been created was to be determined by the relations actually existing between the parties under their agreements or acts. In this respect, the testimony of another physician touching the subject of custom among local physicians, excluded on the hearing, was competent as bearing on the question of agency, or the relation existing between the defendant and the other surgeon. By the clear weight of authority, a physician or surgeon who sends a substitute practitioner to treat a case, on becoming unable personally to fill a professional engagement, is not liable for the latter's negligence or malpractice, unless the substitute acts as his agent in performing the service, or due care is not exercised in selecting the substitute practitioner. And there may be a distinction, depending on the character of the engagement, between sending a substitute practitioner to take full charge of a case, and sending him only for the purpose of looking after the patient during the absence of the sender.

The duty which a physician and surgeon owes to his patient must be measured and determined primarily and in the first instance by the contract of employment. A physician or surgeon may agree to perform an operation without undertaking or rendering himself responsible for the subsequent treatment of the case. He thus contracts against liability beyond the exercise of reasonable care, diligence and skill in the performance of the operation and for such services as are contemplated by both parties to the special or limited contract. A physician or surgeon is not bound to render professional services to everyone who applies, and he may, therefore, by notice or special agreement, limit the scope of his employment. Such is the simple law of contract, but when a physician or surgeon takes charge of a case and is employed to attend a patient, unless the terms of employment otherwise limit the service, or notice be given that he will not undertake, or cannot afford, the subsequent treatment, his employment, as well as the relation of physician and patient, continues until ended by mutual consent of the parties, or revoked by the dismissal of the physician or surgeon, or until his services are no longer needed. And he must exercise, at his peril, reasonable care and judgment in determining when his attendance may properly and safely be discontinued. As a general rule, in the absence of any special agreement limiting the service, or reasonable notice to the patient, when a surgeon is employed to perform an operation, he must not only use reasonable and ordinary care, skill and diligence in its performance, but, in the subsequent treatment of the case, he must also give, or see that the patient is given, such attention as the necessity of the case demands.

But the law does not require of a physician or surgeon absolute accuracy, either in his practice or in his judgment. It does not hold him to a standard of infallibility, nor does it require of him that utmost degree of skill and learning known only to a few in the profession. He is not answerable for mere errors of judgment, where good judgments may differ; but he is supposed to exercise an enlightened judgment, and it must be founded on his intelligence. He engages to bring to his patient's case a fair, reasonable and competent degree of skill and to apply it with ordinary care and diligence, in the exercise of his best judgment. Liability may attach for errors of judgment, however, when they are so gross as to be inconsistent with that degree of skill and competence which it is the duty of every physician or surgeon to employ in the treatment of a case. It is error to say that there is an implied contract that he will use "all known and reasonable means" to accomplish the object for which he is employed.—Journal A. M. A.

PERIODIC HEALTH EXAMINATION BLANKS

Blank forms similar to those printed on pages 10-11 and 14-15 of the Manual of Suggestions for the Conduct of Periodic Health Examinations may be obtained from the Executive Secretary, Mr. C. G. Throckmorton, Room 903, Bankers Trust Bldg., Des Moines, Iowa, at the following prices: Twenty-five, 35 cents; fifty, 65 cents; one hundred, $1.10. Stamps will be accepted.

RESIDUAL EFFECTS OF WARFARE GASES

At the request of the American Legion and other agencies, General Frank T. Hines, director of the U. S. Veterans Bureau, upon the recommendation of Dr. Crossman, medical director, has appointed a board of medical officers to conduct an investigation and make an intensive study of the residual effects of warfare gases.

The members of this board are:

Dr. A. K. Krause, member of the group on Investigation and Research of the Medical Council of the U. S. Veterans' Bureau and associate professor of medicine at Johns Hopkins University.

Lieut.-Col. Harry L. Gilchrist, M.C., U. S. A., chief of Research Division, Chemical Warfare Service, United States Army.

Dr. Philip B. Matz, chief, Medical Research Subdivision, United States Veterans Bureau.

This board held its first meeting March 9, 1926, at the U. S. Veterans Bureau and it was decided to begin the investigation at once. This will necessitate the study of the present status of some 70,000 men who were gas casualties during the World War, and will extend over a period of twelve to eighteen months.

Outside of the knowledge obtained from experimental work on animals very little is known about the remote effects of the various war gases on the body economy. This investigation is purely a scientific one, the findings of which will be not only of clinical value to the ex-service men and the Veterans Bureau, but is being looked forward to with a great deal of interest by some of the other governmental departments.

MISSOURI STATE MEDICAL MEETING

At the annual meeting of the House of Delegates held at Kansas City, May 4 and 5, 1925, the amount of the annual dues to the State Association was increased from $5 to $8 per member, beginning January 1, 1926.

Other state medical associations have long ago abandoned the $5 dues and increased the amount to $10 and even more than that sum in several instances. They are doing for their members the things that our Association should do for its members. We hope the increased amount of dues will enable us to accomplish these things.

MORE REASONS FOR DISAPPEARANCE OF CHIROPRACTORS

Charges were filed, October 6, in Dallas county (Texas), courts against ten chiropractors of Dallas, who, it was reported, violated the State Medical Practice Act in that they publicly professed to be physicians and surgeons and offered to treat diseases without having first obtained a license from an authorized State Board of Medical Examiners.

ANOTHER MARTYR TO THE ROENTGEN RAYS

Mr. Reginald G. Blackall, the roentgen-ray pioneer of the London Hospital, has died from the effects of disease due to his occupation. He joined the London Hospital in 1902 and was one of the earliest workers with the roentgen, at the time when it was not known how dangerous it was to be exposed to the rays all day long. But even when he did know the danger he stuck to his post, although one of his fellow workers lost both arms and another his life. He himself contracted carcinoma, and both his hands had to be amputated. He retired in 1920. The Carnegie Hero Fund awarded him in December, 1923, its honorary certificate and a grant of $375 a year. The hospital allowed him a pension of $1,425 a year and insured his life for a substantial sum for the benefit of his wife and children.—Jour. A. M. A.

SALARIES IN VETERANS BUREAU

According to the present bill introduced by congressman Counery of Massachusetts, senior medical officer of the Bureau would receive pay and allowance of colonel; medical officer, that of major; first assistant medical officer, that of captain, and second assistant medical officer, that of first lieutenant, the pay and allowance of nurses in Veterans Bureau, would be the same as that of nurses in corresponding grades of the army nurses' corps.

In computing longevity pay there would be credited to physicians and nurses all services rendered as medical officers and nurses of Veterans Bureau Medical Service.

FORD HOSPITAL

Some years ago Henry Ford, in his new hospital at Detroit, conceived the idea of a flat rate system which should be applicable to all patients without regard to income, with a maximum limit of $1,000 as a surgical fee, and $70 a week as a medical charge. Recently Mr. Ford has changed this plan to the plan ordinarily adopted by hospitals, based on ability to pay and upon choice of position. Mr. Ford however, still retains the plan of limiting the amount of fee charged.

AUTOS CONTINUE TO ATTACK RAILROAD TRAINS

A review of the accidents last year on highways crossing the tracks of the Chicago, Milwaukee and St. Paul Railway has brought out some interesting facts.

There were 366 accidents of this kind during the year, and 145 of them were caused by automobiles running into trains anywhere from the locomotive to the caboose. In many cases the trains were standing still on crossings when hit by the autos.

SALARIES FOR HEALTH OFFICERS

An editorial in the Journal of the American Medical Association seems to indicate the best outlook of salaries for full time health physicians: junior medical officer's is $1200 a year with quarters, subsistence and laundry; associate medical officer's salary ranged from $3300 to $3900 a year; medical officer's salary ranged from $3300 to $3900 a year; medical officer's salary $3800 to $5000, and senior medical officer's, $5200 to $6000.

In view of the fact that these medical officers are highly trained men it would offer but little inducement to the men that can pass these examinations to give up civil practice for these offices.

AN INTERESTING LEGAL CONTROVERSY

It appears that the Palmer School of Chiropractic has commenced suit in the federal court against Charles H. Jones and the Champion Table Company for infringements on the neurocalometer process patent. The petition sets forth that Dr. Evins was the inventor of the neurocalometer and that on January 24, 1924, he applied for a patent, and that on September 1, 1925, a patent on the process was issued. The patent right was then transferred to the school of chiropractic.

It appears also that Dr. Evins and Frank Elliott are also involved in the suit.

HIGH BLOOD-PRESSURE AN IMPORTANT FACTOR IN LEFT VENTRICULAR DILATATION AND HEART FAILURE

The International Medical Digest abstracts from a paper by George Fahr in Minnesota Medicine the important clinical fact that the author has found that in 75 per cent of all cases of so-called "myocarditis" high blood-pressure was an important factor in the left ventricular dilatation and heart failure. The majority of such cases have pressures above 200 systolic, sometimes being present for from four to ten years.

PASTEUR OR NAPOLEON

According to the Ohio State Medical Journal a recent popular vote was taken in France to determine who, in all French history, is the most popular hero of all time. To the surprise of many Pasteur won by several thousand votes.

FEE SPLITTING

It is claimed Cerro Gordo County Medical Society have discovered irregularities among its members to the extent of dividing fees, in other words, buying special practice. No accusations have apparently been made but the question is now under investigation.

THE GROWING IMPORTANCE OF GELATINE IN INFANT FEEDING

Some time ago, Dr. Joseph Leidy, of Philadelphia said: "The combination of gelatine and milk in infant feeding was long used by my father and the late Dr. W. Pepper. I have continued to use it during the past thirty years, and am of the opinion that it gives results when many other combinations fail."

In recent months the growing interest of the medical profession in gelatine has been noticeable. Doctors are reporting gratifying successes in preventing such infant ailments as milk colic, regurgitation, vomiting, diarrhoea, excessive gas formation and constipation by 1 per cent addition of gelatine to the milk diet.

Thomas B. Downey, Ph.D., Fellow of the Mellon Institute, Pittsburgh, has by standard feeding tests, determined that the addition of pure, plain unflavored gelatine increased the nourishment obtainable from milk by about 23 per cent.

In discussing the digestibility of milks, especially by infants and young children, Alexander and Bullowa have pointed out that the protein content may not be considered as a unity because it is composed of two proteins casein and lactoalbumin with entirely dissimilar properties. Casein is an irreversible colloid exceedingly susceptible to coagulation by acid and rennin, while lactoalbumin is reversible and serves to protect the former.

Analysis shows that mother's milk contains a high proportion of lactoalbumin, the casein being adequately protected. Mother's milk is resistant to coagulation by acids and rennin and its greater acceptability as the food for the infant is reflected by the low mortality where the young are breast fed. On the contrary, cow's milk contains a high proportion of casein and relatively little lactoalbumin; it is poorly protected. In consequence, the casein of cow's milk is very susceptible to coagulation by acids and rennin. The mere coagulation of the casein is not the whole story, because the coagulum carries down much of the fat present, yielding masses that have a tendency to cohere and are of a texture that is quite resistant to penetration by the digestive juices. The voiding of such masses occurs too frequently in artificial feeding; nutrients are lost to the organism and it is quite probable that decomposition products of an undesirable nature are formed within these undigested curds.

This is in no way a reflection on the great nutritive value of cow's milk which is indispensible but simply emphasizes the deterient condition it meets in the human stomach which must be neutralized to insure the complete assimilation of the milk nutriment.

From this viewpoint an obvious modification in artificial feeding is the protection of the unstable casein by the addition of suitable protective colloids.

It is of interest to give careful attention to gelatine in this place. As previously mentioned, its colloidal protection is of the highest order. It is also an excellent emulsifying agent and may function as

such in either an acid or an alkaline medium. It is a common product of exceptional purity, and is an easily digested protein which is readily combined with milk. In combination with milk, the protein content is increased, food value is increased, volume is not appreciably increased and digestibility is increased. Theoretically the employment of gelatine in the child dietary is sound, and laboratory experimentation and clinical experience substantiate these conclusions.

The approved method of combining gelatine with milk is as follows: Soak, for ten minutes, one level tablespoonful of pure, unflavored, unsweetened gelatine (Knox) in one-half cup of cold milk taken from the baby's formula; cover while soaking; then place the cup in boiling water, stirring until gelatine is fully dissolved; and add this dissolved gelatine to the quart of cold milk or the regular formula.

It must be remembered that there is a great difference in gelatine. Realizing the importance of absolute purity in any gelatine that is combined in milk or used in any way in the dietary, the laboratories of the Charles B. Knox Gelatine Company maintain a strict and constant control of the production of Knox Sparkling Gelatine. No sweetening, artificial flavor, or coloring, is ever added to this product.

SOCIETY PROCEEDINGS

Audubon County Medical Association

The Audubon County Medical Association held a meeting at the Park Hotel, Wednesday evening, January 20, for the purpose of electing officers for 1926. Dr. W. R. Koob of Brayton was choosen as president; Dr. P. Soe of Kimballton, vice-president; Dr. J. M. Fulton of Audubon, secretary-treasurer. Dr. R. F. Childs of Audubon was selected as delegate to the state medical meeting with Dr. Leroy Jensen of Audubon as alternate.

Interesting papers were read by Dr. R. F. Childs and Dr. R. A. Jacobsen. Dr. R. H. Payne was elected a member to the society.

Calhoun County Medical Society

Calhoun County Medical Society met at Rockwell City, March 23.

Among those present were C. G. Throckmorton, executive secretary, Des Moines; Dr. Beam of Rolf and Dr. M. J. Kenefick, other executive officers of the Iowa State Medical Society.

Cerro Gordo County Medical Society

The meeting of the Cerro Gordo County Medical Society was held March 15, 1926, at the Chamber of Commerce rooms, Mason City.

After the usual business meeting, Miss Frances B. Van Zandt of Des Moines, state medical librarian, gave a very instructive talk relative to the medical library and the way it functions throughout the state, which was thoroughly enjoyed by the members of the society. E. L. Wurtzer, M.D., Sec'y.

Polk County Medical Society

The Polk County Medical Society met for its regular monthly meeting in the Oak Room of the Fort Des Moines Hotel, on March 30, 1926. The meeting was called to order at 7:40 p. m. by the president, Dr. Thomas A. Burcham.

The minutes of the previous meeting was read and approved. Dr. C. E. Ruth presented some end results of fractures, which had been shown before the society at an earlier date.

Program

Bacteriophage—W. L. Bierring, M.D.

Observations in the Treatment of Syphilis—H. C. Willett, M.D.

Dr. Bierring's paper was discussed by Drs. Simmons, and Don Griswold.

Dr. Willett's paper was discussed by Drs. Auner, Blum, Losh, Schenk. Closed by Dr. Willett.

The application of Dr. Donald H. Kast was presented. Dr. M. L. Turner moved that the by-laws be suspended and Dr. Kast be unanimously elected to membership. Duly seconded and unanimously carried.

The application of Dr. A. M. Merritt, by transfer from Marion county, was presented. Dr. C. E. Ruth moved that the rules be suspended and Dr. Merritt be unanimously elected to membership. Duly seconded and unanimously carried.

Dr. M. L. Turner moved that the entire amount of Dr. C. A. Adams dues be refunded to his widow. Duly seconded and unanimously carried.

Meeting adjourned. L. K. Meredith, Sec'y.

Tama County Medical Society

The Tama County Medical Society met for regular meeting in Toledo, February 27.

Twelve o'clock luncheon was served for twelve doctors and their wives at the balcony tea room. The meeting afterward being held in the parlor of Hotel Toledo.

After the presentation of several heart cases by Dr. A. J. Farnham of Traer, and Dr. A. A. Pace of Toledo, a very interesting and instructive paper was read by Dr. Merrill M. Myers of Des Moines on Symptoms and Diagnosis of Heart Disease—a very timely and important subject.

Albert A. Crabbe, Chrm.

Wayne County Medical Society

The Wayne County Medical Association held a meeting at the office of Dr. B. S. Walker Friday evening, February 12, at which time officers were elected for the ensuing year and a number of other important matters were discussed.

The election resulted as follows: Dr. Chas. Lovitt, Lineville, president; Dr. G. W. Hinkle, Harvard, vice-president; Dr. B. S. Walker, Corydon, secretary and treasurer.

Those attending the meeting were: Drs. Ingram of Sewal, S. W. Corbin of Millerton, G. W. Hinkle of Harvard, Geo. McCullouch of Humeston, Chas.

Lovitt of Lineville, K. R. Luthy, G. H. Sollenbarger, B. S. Walker and W. G. Walker of Corydon.

Southwestern Iowa Medical Society

The spring meeting of the Southwestern Iowa Medical Society was held at Council Bluffs, Iowa, on Thursday, March 25, 1926. The morning was devoted to a presentation of interesting clinical cases at the Jennie Edmundsen Memorial Hospital. Cases and discussions were presented by Drs. Gordon Best, Jack Treynor, Mat O'Keefe, A. A. Johnson, and K. R. Werndorff.

Lunch was served to the visiting physicians at the hospital and the afternoon meeting reconvened at 1 p. m. in the library of the Council Bluffs Clinic building, with Dr. J. H. Wallahan of Corning, Iowa, presiding.

Dr. Enos Mitchell, of Grand River, Iowa, gave the results of his many years' experience in presenting his paper, The Abortive and Early Treatment of Acute Pulmonary Diseases.

Dr. Donald Macrae, Jr., of Council Bluffs, gave a most interesting discussion of The Surgery of Lung Injuries. Several cases from his military and civil experience were cited to uphold his plea for more courage among surgeons in attacking intrapleural injury and hemorrhage.

Dr. K. R. Werndorff of Council Bluffs, presented a very scholarly paper on The Significance of Pain in Orthopedic Work. The types of pain and their allied causes were very clearly brought forth by the essayist.

A very practical and interesting discussion of Diabetes was presented by Dr. V. L. Treynor of Council Bluffs. This paper called forth some lively discussion and was worth while in its enlightening effect.

A presentation of cases and general discussion followed the formal program. Credit is due Dr. Aldis A. Johnson of Council Bluffs, who arranged all details for the entertainment of the visiting doctors.

The fall meeting of the society will be held in Creston, Iowa; date to be announced.

John C. Parsons, Sec'y.

NATIONAL MEDICAL CONGRESS

The Philadelphia County Medical Society is planning to issue invitations for a national medical congress, to be held next year in connection with the sesquicentennial celebration taking place in that city next year.

INSURES ASSISTANTS

The California State Medical Society has arranged for the insurance of all assistants to the secretary and editor of the association, the premiums to be paid by the association.

UNIVERSITY OF BORDEAUX

Post-Graduate School of Oto-Rhino-Laryngological Department

Special course of five weeks' duration beginning July 8, 1926, by Professor Georges Portmann.

Monday

Morning: 9:00 to 12:30—Operations, Hospital du Tondu.

Afternoon: 2:00 to 3:00—Demonstrations of Anatomy, Demonstrations of operative technic by lantern slides, Clinique Saint Raphael.

3:00 to 5:30—Operations on cadaver.

5:30 to 6:30—Lecture, Faculte de Medecine.

6:30 to 7:00—Discussion on the subject of the lecture, Clinique Saint Raphael.

Tuesday

Morning: 9:00 to 12:30—Clinical examinations of patients (ear and nose), Clinique Saint Raphael.

Afternoon: 2:00 to 5:30—Special treatments in oto-rhino-laryngology, Clinique Saint Raphael.

5:30 to 6:30—Lecture, Clinique Saint Raphael.

6:30 to 7:00—Discussion on the subject of the lecture, Clinique Saint Raphael.

Wednesday

Morning: 9:00 to 10:00—Dressings and post-operative treatments, Hospital du Tondu.

10:30 to 12:30—Clinical examinations of patients (throat, larynx, neck), Clinique Saint Raphael.

Afternoon: 2:00 to 3:00—Demonstrations of Anatomy—Operative technic by lantern slides, Clinique Saint Raphael.

3:00 to 5:30—Operation on cadaver, Faculte de Medecine.

5:30 to 6:30—Lecture, Clinique Saint Raphael.

6:30 to 7:00—Discussion on the subject of the lecture, Clinique Saint Raphael.

Thursday devoted to special Operative and Technique Cases

Friday

Morning: 9:00 to 12:30—Clinical examinations of patients (ear and nose), Clinique Saint Raphael

Afternoon: 2:00 to 5:00—Special treatments in Oto-Rhino-Laryngology, Clinique Saint Raphael.

5:30 to 6:30—Lecture, Clinique Saint Raphael.

6:30 to 7:00—Discussion on the subject of the lecture, Hospital du Tondu.

Saturday

Morning: 9:00 to 10:00—Dressings and post-operative treatments.

10:30 to 12:30—Clinical examinations of patients (throat, larynx, neck), Clinique Saint Raphael.

Afternoon: 2:00 to 5:30—Operations, Hospital du Tondu.

5:30 to 7:00—Laboratory, Faculte de Medecine.

Class limited to 12 students, and enrollment, will close June 1, 1926.

Fee for this special course: $200.

For information apply to: Dr. Leon Felderman, 4428 York Road, Philadelphia, Pennsylvania.

PERSONAL MENTION

Dr. Chas. S. Sheldon of Madison, Wisconsin, has reached the age of eighty-three years and is still engaged in active practice. He was secretary of Wisconsin State Medical Society for a period of twenty-five years.

On February 17, Dr. F. C. Hull of Carlisle celebrated the fifticth anniversary of his graduation from College of Physicians and Surgeons at Keokuk. It appears also that Dr. Hull's father, Dr. W. S. Hull, graduated from the same institution twenty-two years earlier, or in 1854. With the exception of seven years Dr. Hull has spent the entire fifty years in the vicinity of Carlisle.

Dr. John F. Peck of Des Moines was reelected president of the Tuberculosis Association at the closing session of the Perry Convention.

Dr. W. J. Egloff of Mason City entertained a group of members of the American College of Surgeons in the fourth district recently. Among the out of town physicians at the meeting were Dr. W. T. Daily, Dr. George Plummer, and Dr. George Kessel of Cresco; Dr. Julius Mimeck, Charles City and Dr. Schilling, New Hampton.

Dr. J. W. Diddy contemplates opening an office in Perry for the practice of medicine about March 15. Dr. Diddy is a graduate of the medical department of the Iowa State University.

Dr. C. C. Griffin of Vinton has recently celebrated his eightieth birthday. Dr. Griffin has practiced medicine in Vinton for fifty-eight years and occupies a high position both in the community and among the physicians.

Dr. Frank Mock of Ruthven has formed a partnership with Dr. Ulving of Elgin. Dr. Mock is a graduate of Loyola University, Chicago. He was a captain in the Army Medical Corps and did special research work in France both during and after the war. Since that time he has been head of the medical department of the State Hospital at Kankakee, Illinois, until he resigned to take up private practice.—Elgin Echo.

Dr. Everett Dudley Plass of the Henry Ford Hospital of Detroit will succeed Dr. Frederick H. Falls as the head of the department of obstetrics and diseases of women in the Iowa State University and will assume his duties at Iowa City in June.

Dr. H. B. Young and daughter of Burlington have returned from a winter trip to the West Indies Islands.

Dr. John J. Lambert, for thirty years instructor in anatomy, histology and embryology at the University of Iowa College of Medicine, Iowa City, has resigned, to become associated with his brother, Dr. Chas. L. Lambert, in practice in New York City.

We are informed by the Forrest City Republican that Dr. John Eiel of Des Moines, has located in Osage, in practice with Drs. Savre and Savrc. Dr. Eiel is a graduate of the medical department of the State University.

The Indianola Tribune informs us that Dr. W. H. Park has practiced medicine for a period of fifty years, all this time in Indianola. He began practice with Dr. William Davis. Dr. Park graduated from the College of Physicians and Surgeons, Keokuk, March, 1876.

Dr. W. O. Parrish of Osceola celebrated his eighty-seventh birthday March 8. During the Civil War he enlisted in Company B, Third Iowa Infantry. At the close of the war he attended the College of Physicians and Surgeons at Keokuk, in 1877.

Dr. Charles J. Drueck of Chicago, addressed the Des Moines County Medical Society, February 9, on the subject of "Practical Points of Proctology".

R. A. Bates, for several years business manager of the University Hospital at Iowa City, has been appointed as the new superintendent of St. Lukes Methodist Hospital at Cedar Rapids.

HOSPITAL NOTES

The merger of the Lutheran Hospital in Des Moines, and the Iowa Congregational Hospital of Des Moines, will give the combined hospital about two hundred beds and one hundred student nurses.

OBITUARY

Dr. William W. Nelson died at his home in Birmingham February 22, 1926, at the age of ninety-one years. He came to Iowa with his parents in 1845, locating in Washington township, Van Buren county. After attending Washington College for two years he took up the study of medicine and in 1857 went to Worcester, Ohio, where he read medicine with Doctors Day and Wilson. During the winter of 1858-59 he attended a course of medical lectures at the medical department of the Iowa State University, then located at Keokuk and the following year completed a medical course by graduating from the Jefferson Medical College at Philadelphia, March 12, 1860, and began the practice of medicine in Pierceville, Van Buren county. On the nineteenth of August, 1862, he was commissioned by Governor Kirkwood as first assistant surgeon of the 15th Iowa Infantry and mustered into service September 14, 1862 at Keokuk. Dr. Nelson participated in the Atlantic to the sea campaign of Sherman. He was mustered out with his regiment at Louisville July 24, 1865, at the close of the war. He was the last surviving field officer of Crocker's Brigade.

On his return from the war Dr. Nelson located in Birmingham where he resided at the time of his death.

Soon after his graduation he was united in marriage to Miss Elmira Matthews of Lawrence county, Pennsylvania.

Dr. Julius Garst of Coon Rapids died suddenly February 19 from heart disease. Dr. Garst located at Coon Rapids forty-four years ago. It appears

that he devoted his professional life to the patenting a headache medicine known as pheno-caffaein.

Dr. Robert C. Molison died at the Deaconess Hospital, Marshalltown, February 24, of heart disease. Dr. Molison was born in Surrey, England, October 18, 1869. After coming to the United States he graduated from the Iowa State College at Ames and later from the Medical School of the Iowa State University. He began practice at Emmetsburg and later moved to Story City where he practiced thirteen years. He enlisted for the World War June, 1917, at Camp Dodge. He was first located at Jefferson Barracks, later at Camp Upton, New York. In 1924 he was commissioned Lieutenant-Colonel of the 7th Medical Corp area. He married Miss Maude Black of Emmetsburg June 19, 1900. His medical society relations were established through the Marshall County Medical Society.

Dr. L. L. Baker of Shenandoah died suddenly at his home March 26, 1926, at the age of seventy-two years. Dr. Baker obtained his medical education at the Central College, St. Joseph, Missouri. After graduating, he practiced medicine at Imogene eighteen years, and later moved to Shenandoah.

Dr. Thomas S. McDavitt of St. Paul was so well known to the profession of Iowa, that we feel at liberty to publish an obituary notice taken from the Journal of the American Medical Association.

Thomas S. McDavitt, trustee of the American Medical Association continuously since 1913, died in St. Paul, March 3. He had suffered for several years with myocarditis.

Dr. McDavitt was born in St. Louis on May 15, 1857; his father was Dr. Virgil McDavitt, a practitioner of that city. After graduation from the Chicago Medical College in 1879, Dr. McDavitt began practice at Minneiska, Minnesota in 1879; he practiced in Winona, Minnesota, from 1880 to 1890, and finally took up practice at St. Paul in 1891, specializing in ophthalmology and otolaryngology. He entered early into the activities of organized medicine, serving as secretary of the Minnesota State Medical Association from 1900 to 1918. Dr. McDavitt also represented Minnesota in the House of Delegates of the American Medical Association, 1906, 1907, 1909 and 1913. At each of these meetings he served also on one of the reference committees of the House. His perspicacity was recognized by his election to the board of trustees in 1913 and by his reelection at the expiration of each term since that time.

Since 1912 Dr. McDavitt has been secretary of the Minnesota State Board of Medical Examiners. His interest in medical education was keen; he aided the battle for higher standards and opposed vigorously any attempts of the unqualified to impose on the public.

BONDS AS AN INVESTMENT

C. G. Throckmorton

Dr. Eicheid, in his very interesting article on Medical Economics in the January number of the Journal, emphasized the necessity for a doctor undertaking a definite investment program, and stated his belief that the bond should be the medium of investment.

Bonds are, no doubt, the best type of investment for a doctor who has undertaken a definite program of investment. But it should be recognized that there are many different types of bonds, and each individual should know just which type is best suited to his own requirements.

To attempt to study the countless issues of securities of all kinds which are placed on the market in the course of a year would be an endless task, and one to which a doctor, never knowing his own time, could devote little time. It is best at the start to place confidence in a reliable organization which will gladly outline a definite program of investment suited to the particular needs of the individual.

Haphazard buying of securities is an ill-advised course. Investors are rapidly awakening to the fact that there is a scientific method of placing funds at interest according to a definitely preconceived investment plan. And this can be done simplest through the advise of a competent investment advisor, a title far more applicable than bond salesman, to many of the men with the leading organizations.

It is necessary first for the advisor to know a man's situation thoroughly. Just as you doctors must be fully informed before you can make a proper diagnosis, so must your investment advisor know your personal situation if he is to advise properly. With a good advisor, the next question is—"How much shall I invest regularly?"

The amount in dollars and cents is up to the individual, but it should be the effort to build, so that at the age of retirement, you will have an income of sufficient size to support you in the manner that you have been living in. It is a most disheartening experience to see an old man, keeping at his practice day after day when he should be living easily, or to see the way some doctors are forced to change their manner of living when old age or infirmity forces them to give up their work.

"But wouldn't I have to invest too large a proportion of my income in order to reach such a goal?" the average man will ask.

No, you can do it very easily, if you will simply determine that you are going to attain a certain mark and keep building toward it. Many people assume that the amounts they could save would not accumulate fast enough to seem worthwhile.

They fail to take into consideration the potential growth of money safely invested in good bonds and the surprisingly rapid accumulation which results from reinvestment of bond interest.

Having passed through the necessary years of study, internship and the starting of a practice, the average doctor will find himself at thirty or a little older, able to consider the matter of a fund for the future. He can reasonably expect to be active until he is sixty or sixty-five and after that he will want to take a well deserved rest. He may not want to give up his practice entirely as he gets older but he certainly will not want to continue the endless round of long hours, holding himself subject to call day or night. Others will want the opportunity to follow studies in which they have become interested, but none of these dreams can become facts unless there is a sufficient fund to care for the needs of his family and himself.

It is not necessary to start out and pinch to save. But a definite amount should be assigned to the investment fund, and if it can be increased some months, so much the better. But for success' sake, it should never be decreased.

Instead of talking in large figures, which mean nothing, for they are not applicable to the average case, let us take the minimum amount which the average doctor should be able to save—twenty-five dollars a month.

If this amount is invested from the time a man is thirty until he is sixty-five, he will have invested only $10,500. But interest earned will amount to more than twice the amount invested, or $24,694, so that the principal sum will be $35,194, which, at 6 per cent, will bring an income of $2,111. These figures, as well as those that follow, assume that payments are made regularly on the first of each month and invested at 6 per cent, with interest compounded semi-annually at the same rate.

Now, if a doctor finds himself able to set aside $50 a month from the time he is thirty until he is sixty, he will have invested $18,000, interest earned will amount to $31,772, the principal sum will be $49,772 and the income will be $2,986.

There are older doctors, however, as well as the younger ones, and they will want to know what they can do to build up the necessary reserve. If a man is forty, has a good practice, and finds himself able to set aside $75 a month, this is what he can do. At sixty-five, he will have invested $22,500, the interest earned will be $29,146 and the total $51,646, which will bring an income of $3,098.

And for the man already on the shady side of forty-five, if he will continue that program until he is sixty-five, he will have invested $24,000, the interest earned will amount to $22,032 and the principal sum will be $46,032, which will give him an annual income of $2,761.

In these four cases are good examples which indicate that any man in the profession can adopt a satisfactory plan, which will yield very good results.

All that is necessary is for the man himself to decide what he is going to aim at, and then to keep at it, steadily. The results are assured.

BOOK REVIEWS

INTRAVENOUS THERAPY

Its Application in the Modern Practice of Medicine; by Walton Forest Dutton, M.D., Formerly Medical Director, Polyclinic and Medico-Chirurgical Hospitals, Graduate School of Medicine, University of Pennsylvania, Etc. Illustrated with 64 Half-Tones and Line Engravings, Some in Colors; Second Revised and Enlarged Edition; F. A. Davis Company, Publisher, 1925. Price, $6. Net.

The recognized position occupied by Intravenous Therapy seems to demand some worked out standard of application. An examination of this book shows the amount of experimental work necessary to reach the accuracy necessary to secure the best results. Until recent years we have been satisfied with drug therapy, but from one source and another experimental methods have brought out methods of treatment directly affecting the blood stream. Dr. Dutton with this method in mind and after a large experience and observation has placed the methods he has found most satisfactory in the hands of the profession in a book of about 500 pages, abundantly illustrated.

The plan is a chapter on venesection, of infusion of salt solution, transfusion by different methods. Following these introductory chapters come Intravenous Therapy in the treatment of disease. All medical men are not agreed as to the limitations of intravenous therapy but of its importance there is no difference of opinion; much of course depends on the skill and therapeutic judgment exercised. Physicians in small cities and towns cannot be barred from this method of treatment but not enjoying the advantages of the special laboratories will find this book of great service, and an important element of safety in their practice. The detailed description of the method to be employed and the illustrations showing the instruments used and how it is done will be especially helpful.

FEEDING AND THE NUTRITIONAL DISORDERS IN INFANCY AND CHILDHOOD

By Julius H. Hess, M.D., Professor and Head of the Department of Pediatrics, University of Illinois College of Medicine; Chief of Pediatric Staff, Cook County Hospital, Etc. Illustrated with 42 Engravings in the Text and One Full-page Colored Plate. Fourth Revised and Enlarged Edition. F. A. Davis Company, Philadelphia, 1925.

This book of 556 pages is one of great value, coming as it does from the pen of one of our most famous and conscientious pediatricians, will excite the interest of every practitioner in this field of medicine and every physician in general practice.

Without entering upon detailed review of the contents of this book we will content ourselves with

expressing our appreciation of the work so ably presenting the important question of the treatment of Nutritional Disorders of Infancy and Childhood. Every practitioner of many years' standing who has in mind the therapeutic of infancy and childhood in former years, appreciate the work of such men as Dr. Hess, and Dr. Hess in particular, to whom we owe a debt of gratitude. This appeals particularly to the writer who has had the opportunity to witness the evolution of this important branch of medical practice.

DEVELOPMENT OF OUR KNOWLEDGE OF TUBERCULOSIS

By Lawrence F. Flick, M.D., L.L.D., Co-Founder of the Rush Hospital, For Diseases of the Chest; Organizer of the Pennsylvania Society for the Prevention of Tuberculosis, Etc., Etc., 738 Pine St., Philadelphia, 1925. Price, $7.50.

This interesting book shows how our knowledge has grown in relation to tuberculosis since early times. What we know of the early history of the disease is from early Greek literature. The author is of the opinion that tuberculosis existed in some part of the world before the records show it.

Commencing with the early Greek literature we pass from one writer to another showing in a progressive manner what views were held particularly in regard to treatment, much of what was written was by lay writers. The medical practitioners of the time did not have a high standing with the public. Pliny the Elder and Pliny the Younger who furnished the principal records of their times had little respect for medical practitioners. Passing on to the time of Galen and Aesculapius we come to the Roman period in the second century. Not much was added to our knowledge of tuberculosis until the seventeenth century in England, France, Italy and Germany.

The book is a review of the progress of knowledge of the disease from the early Greek periods to the present. The material is arranged in chronological order and liberal quotations from medical and lay writers are made.

By the following the author we are informed by writers from the earliest records to the present of the views held as to the nature and cause of tuberculosis, its pathology and treatment, covering this long period of time. Much clinical knowledge was gained but it was not until the time of Robert Koch in 1882 that important scientific knowledge was acquired.

It is interesting to follow the course of the history of a disease which has occupied the mind of civilized man since the Code of Hammurabi was written, 2250 years before the Christian Era to the present time. It shows how slow the human mind worked for the first 4000 years and how rapidly during the last forty years. Dr. Flick's work may be read by the lay public with as much interest as by the medical public.

In a work of this kind in which so many references are made a voluminous index is of great importance and this the author has provided to the great comfort and advantage to the reader and student.

THE ART OF MEDICAL TREATMENT

By Francis W. Palfrey, M.D., Visiting Physician, Boston City Hospital; Instructor in Medicine, Harvard University. Octavo of 463 Pages. W. B. Saunders Company, 1925. Cloth, $4.50 Net.

The author explains that the larger and more important works on medicine are often so voluminous as to discourage the ordinary student, that he is inclined to choose the smaller volumes which point out the direct methods of treatment and serve largely to form the basis of prescription making for the treatment of certain diseases. This fact Dr. Palfrey deplores and regrets that the larger and more authoritative works are not more thoroughly studied as giving the practitioner and student a fuller knowledge of medicine. For the reasons above stated, the author has undertaken to prepare a work that shall occupy a middle ground, not to discourage the use of the larger more complete works, and to encourage students of medicine not to depend on the smaller and less authoritative books.

We shall not attempt to present in detail the contents of this book, but indicate in a general way the purpose the author apparently has in mind. A statement made in the introduction is suggestive: "In an attempt to teach the art of medicine the medical schools of today probably give the student less than the student of a century ago obtained when he studied medicine as an apprentice to one established practitioner." The author then proceeds to consider the various forms of disease in a scientific and practical manner and make up as far as possible the loss the student and practitioner sustain in not preparing himself more thoroughly in all that relates to medicine. It is a somewhat difficult task that Dr. Palfrey has set himself to do, but it appears to have been accomplished with reasonable success.

PERSONAL AND COMMUNITY HEALTH

By Clair Elsmere Turner, Associate Professor of Biology and Public Health in the Massachusetts Institute of Technology; Associate Professor of Hygiene in the Tufts Medical and Dental Schools, Etc., Etc., Illustrated. The C. V. Mosby Company, St. Louis, 1925. Price, $2.50.

In the preface we are informed that "This book has been prepared for the student at the university, college or professional school. It deals with the health of the individual and with the health of the community".

In this book studies in anatomy and physiology as such have been omited, and the author proceeds at once to the presentation of health questions. In the

first chapter we have a consideration of Health Values, followed by a chapter on The Hygiene of Nutrition which includes personal hygiene, diet, digestion and assimilation, including in chapter three, The Hygiene of Action. The above leads to a consideration of the hygiene of the Nervous System, reproduction, the month and so on. Then with another chapter comes "The New Science of Disease Prevention" and Immunity. With chapter ten, The Three Great Plagues, Tuberculosis, Syphilis and Influenza. The question of Food Control reecives considerable attention, also water supply and waste disposal, followed with a discussion of Administration. We are able to consider only some of the principle questions in relation of hygiene.

The subject is presented in form and language suited to readers not especially trained in health work but are interested in health activities, including school hygiene and communicable diseases.

ALLERGY, ASTHMA, HAY FEVER, URTICARIA AND ALLIED MANIFESTATIONS OF REACTIONS

By William W. Duke, Ph.B., M.D., Kansas City, Missouri, With 75 Illustrations. C. V. Mosby Company, St. Louis, 1925. Price, $5.50.

Dr. Duke has taken up in this book a rather difficult but very interesting subject. Until quite recently the question of hypersensitiveness to certain foods and other substances was entirely unknown except the clinical fact of sudden sickness more or less serious and sometimes suddenly fatal, could not be accounted for, finally this sensitiveness or reaction was accounted for by what was called anaphylaxis. This hypersensitiveness was observed in laboratory experiments when a substance of a certain character was injected and followed in a few days or a week by another injection of the same kind. A series of fatal results followed even in an ordinary food substance. In recent years investigations have greatly increased our knowledge on this subject.

In Part One of this volume we have a Discussion of Experimental Anaphylaxis, Serum Sickness, Bacterial in considerable detail from an experimental and clinical point of view and from the point of treatment.

HOSPITAL AND HEALTH AGENCIES IN LOUISVILLE, 1924, A SURVEY

By Haven Emerson, M.D. and Anna C. Phillips.

This survey presents an interesting account of the health work and hospital activities in Louisville and shows to what an extent the medical profession has cooperated with the public in bringing about better conditions. In other words, the results of the cooperation of the public with the medical profession in bringing about better health and hospital conditions in the city of Louisville.

AN INTERMEDIATE TEXT-BOOK OF PHYSIOLOGICAL CHEMISTRY

With Experiments by C. J. V. Pettibone, Ph.D., Associate Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. The C. V. Mosby Company, St. Louis, 1925. Price, $3.25.

GARVAN LEADS FIGHT ON COMMON COLD

Will Finance a Research to Discover Cause and Cure for Root of Many Ills

A research to discover the cause and a cure for the common cold, which was pronounced one of the greatest scourges of humanity, was undertaken by the American Drug Manufacturers' Association at its convention in New York City recently, when an offer to finance such a research was made by Francis P. Garvan, president of the Chemical Foundation.

Reporting good progress in the fight to establish the chemical industry in this country in competition with Germany in the fields which Germany formerly controlled, Mr. Garvan branched into the subject of the common cold, which he said was one of the greatest causes of mortality and economic loss, in spite of the fact that it is usually regarded as of slight importance. He said:

"Sitting at my desk, it seems to be as if a new industry was born in this country every minute, fathered by chemistry and mothered by research. But recently, in my pride and boasting of our achievements, the curtain lifted over something undone, a problem I have brought to you and which has, I might almost say, overwhelmed me in its importance and in the little that has been done with it. This is the subject of the common cold.

"When you come to consider that all through our lives we go on suffering from a cold and pneumonia, from mastoiditis and the sinus troubles, and a thousand and one things which develop out of the common cold, to say nothing of the inherent weakening of the physical structure by these repeated assaults upon ourselves, but more particularly upon our children and our women, you realize the gravity of the common cold.

"Do you realize that ten days of every man, woman, and child's activity a year, on the average, are lost throughout this country? It amounts to more than a million years of activity annually. The loss to agriculture, industry and all business activities is some 700,000 years of working time through the incapacitation of 15,000,000 workers in this country."

The American Drug Manufacturers' Association voted to cooperate with the Chemical Foundation in seeking a method to check the ravages of colds.

HOW TO TAKE CARE OF HYPODERMIC SYRINGES AND NEEDLES

Recently a pamphlet was published on "Standardizing on Sizes and Makes of Hypodermic Syringes and Needles", which contains a large amount of information valuable to all practicing physicians.

It gives many suggestions as to the gauge and length of needles and the size of the syringes which are generally used for the various operations, which conclusions were reached after consultation with some of the foremost surgeons in the country.

There are also many notes regarding the care and sterilization of needles and syringes and the pamphlet also outlines the comparative merits and cost of steel, nickeloid, gold and platinum-iridium needles.

Any physician interested can secure a complimentary copy by writing to Becton, Dickinson & Co., Rutherford, New Jersey.

NEW AND NON-OFFICIAL REMEDIES

In addition to the articles enumerated in our letter of November 27, the following have been accepted:

Arlington Chemical Company:

Acacia (Scap.) Pollen Extract—Arlco; Alfalfa Pollen Extract—Arlco; Ash Pollen Extract—Arlco; Box Elder Pollen Extract—Arlco; Burning Bush Pollen Extract—Arlco; California Walnut (Black) Pollen Extract—Arlco; Cocklebur Pollen Extract—Arlco; Cosmos Pollen Extract—Arlco; Fleabane (Common) Pollen Extract—Arlco; Goose Foot Pollen Extract—Arlco; Hemp Pollen Extract—Arlco; Indian Rice Pollen Extract—Arlco; Indian Wormwood Pollen Extract—Arlco; Live Oak Pollen Extract—Arlco; Marsh Elder Pollen Extract—Arlco; Meadow Fescue Pollen Extract—Arlco; Mugwort Pollen Extract—Arlco; Oat Grass Pollen Extract—Arlco; Olive Pollen Extract—Arlco; Pine Pollen Extract—Arlco; Plantain Pollen Extract—Arlco; Prairie Sage Pollen Extract—Arlco; Poplar Pollen Extract—Arlco; Privet Pollen Extract—Arlco; Red Fescue Pollen Extract—Arlco; Rye Grass Pollen Extract—Arlco; Slender Ragweed Pollen Extract—Arlco; Sweet Clover Pollen Extract—Arlco; Sweet Vernal Grass Pollen Extract—Arlco; Sycamore Pollen Extract—Arlco; Thistle Pollen Extract—Arlco; Velvet Grass Pollen Extract—Arlco; Western Cottonwood Pollen Extract—Arlco; Western Ragweed (Giant) Pollen Extract—Arlco; Winter Fat Pollen Extract—Arlco; Yellow Daisy Pollen Extract—Arlco.

Cutter Laboratory:

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Annual Salt Bush Pollen Extract—Cutter; Arizona Ash Pollen Extract—Cutter; Bermuda Grass Pollen Extract—Cutter; Black Walnut Pollen Extract—Cutter; Canary Grass Pollen Extract—Cutter; Carless Weed Pollen Extract—Cutter; Coast Sagebrush Pollen Extract—Cutter; Cocklebur Pollen Extract—Cutter; Common Ragweed Pollen Extract—Cutter; Cottonwood Pollen Extract—Cutter; False Ragweed Pollen Extract—Cutter; Giant Ragweed Pollen Extract—Cutter; Johnson Grass Pollen Extract—Cutter; June Grass Pollen Extract—Cutter; Lamb's Quarters Pollen Extract—Cutter; Live Oak Pollen Extract—Cutter; Marsh Elder Pollen Extract—Cutter; Mugwort Pollen Extract—Cutter; Olive Pollen Extract—Cutter; Rabbit Bush Pollen Extract—Cutter; Orchard Grass Pollen Extract—Cutter; Plantain Pollen Extract—Cutter; Red Root Pigweed Pollen Extract—Cutter; Red Top Pollen Extract—Cutter; Russian Thistle Pollen Extract—Cutter; Rye Grass Pollen Extract—Cutter; Sagebrush Pollen Extract—Cutter; Shadscale Pollen Extract—Cutter; Sheep Sorrel Pollen Extract—Cutter; Timothy Pollen Extract—Cutter; Velvet Grass Pollen Extract—Cutter; Western Ragweed Pollen Extract—Cutter; White Oak Pollen Extract—Cutter; Wild Oat Pollen Extract—Cutter; Yellow Dock Pollen Extract—Cutter.

Parke, Davis & Co.:

Aster Pollen Protein Extract Diagnostic—P. D. & Co.; Barnyard Grass Pollen Protein Extract Diagnostic—P. D. & Co.; Bermuda Grass Pollen Protein Extract Diagnostic—P. D. & Co.: Burweed Marsh Elder Pollen Protein Extract Diagnostic—P. D. & Co.; Chestnut Pollen Protein Extract Diagnostic—P. D. & Co.; Cocklebur Pollen Protein Extract Diagnostic—P. D. & Co.; Common Ragweed Pollen Protein Extract Diagnostic—P. D. & Co.; Corn Pollen Protein Extract Diagnostic—P. D. & Co.; Cosmos Pollen Protein Extract Diagnostic—P. D. & Co.; Crab Grass Pollen Protein Extract Diagnostic—P. D. & Co.; Dahlia Pollen Protein Extract Diagnostic—P. D. & Co.; Dandelion Pollen Protein Extract Diagnostic—P. D. & Co.; Halberd-Leaved Orache Pollen Protein Extract Diagnostic—P. D. & Co.; Giant Ragweed Pollen Protein Extract Diagnostic—P. D. & Co.; Indian Hair Tonic Pollen Protein Extract Diagnostic—P. D. & Co.; Johnson Grass Pollen Protein Extract Diagnostic—P. D. & Co.; June Grass Pollen Protein Extract Diagnostic—P. D. & Co.; Maple Pollen Protein Extract Diagnostic—P. D. & Co.; Marigold Pollen Protein Extract Diagnostic—P. D. & Co.; Orchard Grass Pollen Protein Extract Diagnostic—P. D. & Co.; Plantain Pollen Protein Extract Diagnostic—P. D. & Co.; Prairie Sage Pollen Protein Extract Diagnostic—P. D. & Co.; Rose Pollen Protein Extract Diagnostic P. D. & Co.; Rough Marsh Elder Pollen Protein Extract Diagnostic—P. D. & Co.; Sage Brush Pollen Protein Extract Diagnostic—P. D. & Co.; Western Ragweed Pollen Protein Extract Diagnostic—P. D. & Co.; Western Waterhemp Pollen Protein Extract Diagnostic—P. D. & Co.; Wheat

Pollen Protein Extract Diagnostic—P. D. & Co.; White Clover Pollen Protein Extract Diagnostic—P. D. & Co.; White Goose Foot Pollen Protein Extract Diagnostic—P. D. & Co.; Willow Pollen Protein Extract Diagnostic—P. D. & Co.; Wormwood Sage Pollen Protein Extract Diagnostic—P. D. & Co.; Yarrow Pollen Protein Extract Diagnostic—P. D. & Co.; Yellow Dock Pollen Protein Extract Diagnostic—P. D. & Co.; Protein Extracts Diagnostic—P. D. & Co. Group 28; Protein Extracts Diagnostic—P. D. & Co. Group 29; Protein Extracts Diagnostic—P. D. & Co. Group 30; Protein Extracts Diagnostic P. D. & Co. Group 31.

Physicians Diagnostic Laboratories:
Concentrated Culture Bacillus Acidophilus—P. D. L.

Swan-Myers Company:
Mixed Ragweed Concentrated Pollen Extract—Swan-Myers.

E. R. Squibb & Sons:
Scarlet Fever Streptococcus Antitoxin Concentrated.
Scarlet Fever Streptococcus Toxin for Dick Test—Squibb.
Scarlet Fever Streptococcus Toxin—Squibb.

In addition to the articles enumerated in our letter of January 30, 1926, the following have been accepted:

Lederle Antitoxin Laboratories:
Ragweed Combined Pollen Antigen—Lederle.

H. K. Mulford Co.:
Lamb's Quarters Pollen Extract—Mulford Fourth Series.
Ragweed Pollen Extract (Fall)—Mulford Fourth Series.
Timothy Pollen Extract (Spring)—Mulford Fourth Series.
Wormwood Pollen Extract—Mulford Fourth Series.

Swan-Myers Co.:
Elm Concentrated Pollen Extract—Swan-Myers.
Yellow Dock Concentrated Pollen Extract—Swan-Myers.

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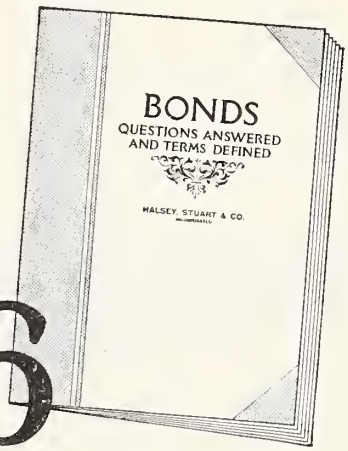

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THE experienced as well as the beginning bond buyer will find it valuable to have at hand a copy of our booklet, "BONDS—Questions Answered and Terms Defined."

This book provides a digest of information which might otherwise be gained only from broad experience or wide reading concerned with investments.

It is indexed for ready reference and covers questions which long observation has shown most frequently present themselves to investors when selecting or handling their bond investments.

Non-technical definitions of commonly used bond terms are included.

We shall welcome the opportunity to place this booklet in the hands of any one to whom it may be useful.

Write to nearest office for Booklet JI-56

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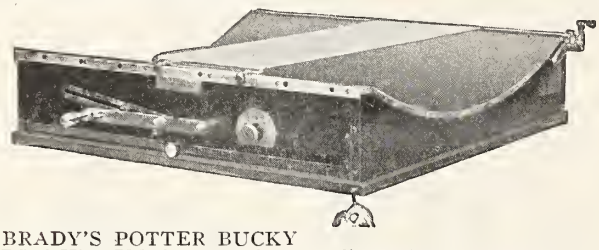

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Read This Month's Advertisements

The Journal of the Iowa State Medical Society

Vol. XVI | Des Moines, Iowa, June, 1926 | No. 6

PRESIDENT'S ADDRESS*

S. A. Spilman, M.D., F.A.C.S., Ottumwa

Mr. Chairman, Guests and Members of the Iowa State Medical Society:

The committee to whom was entrusted the duty of preparing a program befitting this, the seventy-fifth anniversary of our State Society, entered upon that work with some misgivings as to what would be most pleasing to its members and at the same time contribute to their intellectual entertainment. To this end invitations were extended to men of outstanding ability in their several lines, and local talent, of which Iowa boasts an abundance, was relegated to the side lines.

We hope and believe this will meet with your approval and that all will unite in an effort to make the occasion a brilliant success.

Medical Societies

It is often said that there are too many medical societies. It takes too much time and is too expensive to attend them. There may be some truth in this statement, but this should not apply to our county and state societies. Those who attend, though they may not take an active part, cannot help being benefited by the papers and discussions. The doctor who habitually absents himself from such meetings must of necessity grow narrow and too often bigoted.

The county being the unit in our scheme it is of great importance that each county keep up its organization. It may not be feasible to have a stated program at even monthly intervals, but surely enough interest should be taken to cause frequent association.

I have been informed that one society meets once a month for luncheon, and this is an occasion of social converse and thus gives an opportunity to form and foster friendships that are of benefit to all. And why not? There will be at times feelings of jealousy. There will be tale bearers who will attempt to stir up ill feelings between the doctors they like and those they dislike. I venture the statement that if one of you should hear what a fellow practitioner is reported to have said about you and then hear what he really said it would be vastly different. It would be far better to meet face to face, have an understanding, forget your differences and go about your business. Life is far too short for quarrels

Periodic Health Examinations

Periodic health examinations have been strongly urged for several years by some of our most advanced thinkers. It has been specially urged since the World War. All remember what a startlingly large number of young men were rejected because of ailments that might at one time have been remedied. The important question is, how can this best be carried out? There has been much objection in some quarters to the sending out of some one on state pay to teach the doctors how to do that which they believed they were competent to do themselves, hence they have refused to take patients to these clinics and the scheme has failed because of this lack of cooperation.

There is another trouble about the whole matter. It takes so much of the busy man's time that he feels he cannot afford it. I believe the county societies should take this matter up and consider it seriously and agree on some plan of procedure. It should receive publicity through the press under and by the authority of the society and families advised to consult their physicians, and sufficient charge should be made to compensate for the time and work required. For those who are unable to pay, and they are few in this country, the state should make provision. There is no physician worthy of the name who is not capable of carrying out the necessary technic, and no intelligent person once convinced of the benefit of the procedure who is unwilling to pay a reasonable fee for the same. I would in this connection sound a word of warning. There are not a few that the suggestion of the possibility of some lurking disease is sufficient to put them in

*Delivered at the Seventy-Fifth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 12, 13, 14, 1926.

a state of high nervous excitement. The thoughtful physician will seek to avoid this danger.

World War Veterans Act, 1924

It would seem that this law is likely to work a great injustice, as it provides free treatment at government expense, including transportation, to any person who has served in any military unit, either as soldier or nurse, upon furnishing evidence of that fact, whether his disability is related in any way to such service or not. This is manifestly unfair, and savors strongly of state medicine. I have heard several physicians who served in the war condemn it in the strongest terms.

Irregular Practitioners and Medical Legislation

Our state is cursed by numerous cults and isms, founded often upon the most unreasonable, ludicrous and ridiculous assumptions, and yet meet with popular favor because of the plea that every one should be free to choose his own method of treatment. This proposition no one can deny, but if there is any reason for placing any restrictions at all upon those professing to practice the healing art, it would seem but fair to require of all a knowledge of the essential branches of the allied sciences. To this end there should be one licensing board which should pass upon the applications, including not only the educational qualifications but the moral character of the individual.

It is to be regretted that such a small number of our profession are inclined or feel financially able to enter politics and secure a place in our law making body. No law should be proposed or advocated that could in any way be construed as otherwise intended than for the public good.

Lay Medical Education

There are two things that make for the spread of medical knowledge among the laity. The first is through the individual efforts of the doctor in his relations with the public, the second through the press. We are more and more coming to realize the power of the second method. The time was when it was thought beneath the dignity of the doctor to give out information of a professional nature. Now articles appear in our magazines and newspapers by men of known ability and it is taken and devoured by many. This might well be taken up locally and much valuable knowledge transmitted to the laity.

"Hygeia", published by the American Medical Association, is a very valuable publication to put into the hands of the laity. Copies should be furnished schools. I have known of many instances of teachers in our public schools seeking the services of the most arrant quacks. They do not always seem able to differentiate between the sound and the unsound logic in matters medical, and such sources of knowledge as would appeal to their reason should be placed within their reach.

I would plead for more care in making examinations. Haste is usually not important. The individual comes to you for aid along your special line and he usually appreciates and is willing to pay for the necessary time and work required. History taking is of such vast importance that it can not be too strongly stressed. In addition to the physical examination the laboratory must be called upon for its revelations. The nervous and mental status must not be overlooked.

Hospitals

I believe there should be at least one well appointed hospital in each county. It makes a center around which the medical men should unite, and while it is a great benefit to the community it may be made an instrument of instruction to the physicians and thereby redound to the good of the citizens.

Epidemiology

Our commissioner of health is making a great effort to put our state in front rank along lines of prevention of contagious diseases. His circulars are full of important information and should be carefully read by every physician and every aid should be extended to him. His suggestions as to the banishment of diphtheria from the state are most timely and should receive our most serious consideration. It is encouraging to note the advances in the prevention and control of scarlet fever. Inoculation against typhoid fever has been proven of the greatest value and it is high time it was more generally employed in private practice.

In conclusion let us remember that as a profession, as the conservators of the public health, as leaders in the physical uplift of our fellows, we are called upon to be vigilant, to be aggressive, to be ever ready to detect and to defeat the powers of ignorance and superstition. No matter at what cost of money or position we should not hesitate to perform our duty to humanity. Let us not be carried away by the too evident tendency of the times to commercialize our profession, but with faith in God and the right, let us continue to march forward to a more glorious goal.

SLIDING HERNIA*

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What is sliding hernia? The only viscus that can be contained in a true sliding hernia is one whose normal habitat is the posterior abdominal wall, is only partially covered with peritoneum, and which has normally no appreciable mesentery.[4] The ascending colon, descending colon, and bladder are the only organs that normally fall within these limitations. Congenital developmental anomalies of the cecum or first portion of the sigmoid may occur, leaving them partially covered with peritoneum. They may under these circumstances be contained in sliding hernias. The cecum may thus often form the posterior portion of the sac while the appendix lies within the sac.[2]

Several authors have proposed theories regarding the formation of sliding hernia. Those evolved by Moschcowitz appear the most logical. He believes a sliding hernia may be produced by either of two mechanisms. By one method, which he calls the pushing type, the viscus involved is conceived as first presenting at the inguinal opening. The peritoneum, if present, is drawn down by this viscus and the resulting sac is always small. By the other method the peritoneum makes the initial entrance into the inguinal canal. As it enlarges it may contain the usual elements of a simple hernia. After enlargement it may make traction on the large bowel and thus bring it through the inguinal opening with its nutrient vessels.

I have encountered but two cases of sliding hernia in five years of active surgical practice, and this probably represents general surgical experience outside of clinical centers or institutions. Reports of this condition are not common.[4] The surgeon may not recognize sliding hernia when he has a case of it. The obstacles he encounters he may believe are due to adhesions resulting from former inflammatory processes caused by pressure from a truss, or infection. He may not wish to record an unpleasant experience. If a sliding hernia is not recognized real difficulties may arise and possibilities for harm to the patient be ever present. Considerable confusion arises from the erroneous conception that invagination of the cecum, transverse colon, or sigmoid in a hernial sac constitutes sliding hernia of these structures.

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The diagnosis is not often made preoperatively because the differential diagnostic points are so trivial that they do not lead to definite conclusions and because the condition is so rare that it may not enter the examiner's mind. The diagnosis was not made before operation in any instance in a series of seven cases reported by Criley.[1]

The most reliable points in the diagnosis of sliding hernias are: (1) they are seldom strangulated because they are usually large with a wide inguinal opening; (2) they cannot be completely reduced and attempts at reduction are painful; (3) pressure from a truss is painful, even intolerable; for this reason a truss that has been worn for a long time may be discarded in later years, which may mean that a simple hernia, formerly reducible, has acquired the nature of a sliding hernia; (4) tympany may be elicited by percussion over the tumor because of gas in the colon; (5) a roentgenogram of the colon may show the viscus in the hernia (Figure 1), and (6) when the bladder is suspected to be the sliding element in a hernia such measures as injection of air or water and percussion over the area, followed by deflation or decompression have been suggested. There is a decrease in the size of the tumor if the bladder is responsible. A crystogram may be of value.

Figure 1. A right inguinal sliding hernia reaching to the level of the knees. It contained the cecum, ascending colon, part of the transverse colon and probably most of the small intestine.

A number of surgical procedures have been evolved for the reduction and cure of sliding

hernia. Most surgeons, however, have found these inapplicable because of the variability of conditions presented in different cases. The method of making flaps of the peritoneal sac[6] and turning them around the prolapsed cecum to cover its denuded surface has not been possible of execution in many cases. Most surgeons have met the situation with the method demanded by the exigencies of the occasion and the originality and skill inherent in their training and experience. Moschcowitz describes the first case he encountered, in which he freed the bowel by cutting and ligating vessels in the adherent tissues. He realized, to his discomfiture later, that he had ligated the branches of the inferior mesenteric artery supplying that segment of the prolapsed bowel, but fortunately no untoward complications developed. Many surgeons have probably had the same experience with their first case of sliding hernia, except that perhaps their results have not been so fortunate.

Moschcowitz has recently made a suggestion with regard to surgical procedure that may be of value. In the pushing type of hernia with small or no peritoneal sac he suggests that the incision in the peritoneum should be high at the internal inguinal ring so that traction may be put on the intraabdominal portion of the prolapsed bowel. This, he believes, combined with blunt dissection and pushing upward of the lower part of the loop of bowel will replace it beneath the structures of the inguinal floor. When the hernia is the pulling type, with a larger peritoneal sac and usually lower prolapse of the bowel, he would make a second incision opposite the umbilical region, drop the patient in the Trendelenburg position, pack off the small bowel, then "reverse the mechanism" by making traction higher on the intraabdominal portion of the colon. This should pull the prolapsed loop of bowel with its peritoneum up to the level of the inguinal ring. The parietal peritoneum may then be sutured to the posterior abdominal structures and the upper incision closed. The sac in the original incision is now ligated and excised, the remaining loop of the prolapsed bowel pushed back beneath the structures of the inguinal floor, and the usual radical repair for inguinal hernia done.

One of the two cases of sliding hernia which I have observed was of an enormous right inguinal hernia. The patient was seventy-nine years old and not having trouble from the hernia. Because of its great size and because of the age of the patient the hernia was considered inoperable. The patient first noticed this hernia sixty years ago during forced marches while he was a soldier in the Civil War. For many years it could be reduced and was retained with a truss. It then apparently had all the characteristics of a simple indirect inguinal hernia. During succeeding years it continued to increase in size and gradually assumed such proportions (Figure 1) that it extended down to the level of the knees. It contained the cecum, ascending colon, part of the transverse colon, and probably most of the small intestine. A roentgenogram taken higher than the one illustrated shows complete prolapse of the transverse colon toward the inguinal ring from its attachment in the splenic region.

The second patient was a man aged forty-nine, with a hernia protruding in the left inguinal region. He weighed 225 pounds, and was first seen in August, 1921. His history and physical examination except those relating to the hernia were unimportant. Twenty-four years before examination while he was employed in a glass factory in Russia, he jumped from a box to the floor, and at once felt a piercing pain in the left inguinal region. Examining here he noticed a small mass which felt like a marble or a button. During the next twenty years he wore a truss and had no discomfort from the hernia. After coming to this country he worked as a peddler, lifting daily large barrels of apples, potatoes, and other vegetables without discomfort or inconvenience from either hernia or truss. Four years before I examined him he had felt a sudden piercing pain in the left inguinal region on attempting to lift his wife quickly from the floor, where she had fallen in an hysterical condition, to a nearby couch. On examination he found a mass "as large as a goose egg" in this location. The tumor was easily reduced and he continued to wear a truss for the three succeeding years without much difficulty. One year before I saw him an illness of his wife necessitated his running up and down stairs many times a day. During the next two or three months he began having difficulty in controlling the hernia with the truss and found it necessary to adjust it many times a day. After six months, pressure from the truss was becoming painful and he had much more difficulty in so adjusting it that it would retain the mass. Three months later he had discarded the truss.

Examination revealed a large left inguinal hernia with a wide neck, extending 25 cm. below the ramus of the pubis. The hernia was irreducible and attempts to reduce it were painful. The patient was a large man with a tense protuberant abdomen that focused its contents toward the inguinal region. The possibility that the tumor was a sliding hernia did not occur to me. If due consideration had been given to the

size of the tumor, the wide neck of the sac, the inability to reduce the mass, and particularly to the patient's previous intolerance for the truss, doubtless at least a tentative diagnosis of sliding hernia could have been made. A roentgenogram of the colon would probably have shown the loop of bowel descending into the scrotum. There was an area of cutaneous atrophy and the scar of a recently healed ulcer in the left inguinal region, the result of years of pressure from the truss.

Operation was performed August 8, 1921. The usual inguinal incision was made parallel to Poupart's ligament and 3 or 4 cm. above it, and the structures of the cord were separated from the mass. Fortunately the unusual appearance of the tumor dictated caution, and the incision in the sac was placed high at the internal inguinal ring. The hand when slipped into this opening passed into the sac down to about the level of the ramus of the pubis where it ended like a mitten. Below this the mass continued, covered with adhesions and inflammatory exudate which made its identification as the large bowel very uncertain. The loop, however, turned back through the wide inguinal ring and was found to be the first loop of the sigmoid. The sac was empty and the redundant portion of it was ligated, excised, and the stump buried beneath the muscles of the abdominal wall.

By blunt dissection, traction on the descending loop, and upward pressure on the distal portion, the mass was finally reduced beneath the structures of the inguinal floor without traumatizing its blood-vessels. The hernia was repaired by the Andrews-Bassini-Masson method. The conjoined tendon and internal oblique muscle were sutured to Poupart's ligament as was the medial flap of the fascia of the external rectus muscle, both being brought beneath the cord. The lateral flap of the fascia was imbricated over the medial flap beneath the cord. Several sutures were also taken above the exit of the cord through the internal inguinal ring. Due to the recently healed ulcer or the unusual manipulation necessary, infection developed in the wound, but this ultimately disappeared.

Four months later the hernia had recurred and there was a hydrocele, about 15 cm. in diameter, on the left side. The hernia extended only to the entrance of the scrotum but, like the former one, was irreducible. In order to obviate the possibility of further recurrence consent to an orchidectomy was obtained in case it should prove necessary.

At the second operation, May 15, 1922, a loop of descending colon uncovered by peritoneum was found. There was no peritoneal sac and the peritoneum was not opened. The testicle was delivered, the cord structures ligated and orchidectomy completed. Because of the few adhesions about the prolapsed bowel it was comparatively easy to elevate the redundant loop by blunt dissection and push it upward into the inguinal region. Radical repair of the inguinal floor was done by the method previously described.

The hernia has not recurred after three years and a half although the patient has retained his weight and does all of the work in a busy grocery store.

Summary

Sliding hernias are rare and a discussion of them may therefore be of service. The danger to the patient is real and difficulties are great at operation if the fundamental anatomic considerations regarding this type of hernia are not kept in mind.

Usually a definite diagnosis cannot be made previous to operation.[3] Any large hernia with a wide neck, particularly if it is irreducible and attempts at reduction are painful, should suggest the sliding variety. Intolerance for a truss is usual. Roentgenographic examination of the colon may be of value.

No definite surgical procedure is suitable for all cases of sliding hernia. The most important consideration is to recognize the presence of a prolapsed viscus not covered by peritoneum and to remember that the posterior structures of this viscus may contain important nutrient blood-vessels. The sac, if present, should be opened high at the internal inguinal ring. This will allow examination, determination of the situation and identity of the structures involved and will be a great aid in planning the surgical procedure. The method adopted in reducing the bowel will largely be dictated by the exigencies of the circumstances as well as the training and originality of the surgeon. The plan described by Moschcowitz, of making traction on the intraabdominal colon either through the incision in the inguinal region, or through a second incision placed beside the umbilicus, is worthy of consideration.

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ECTOPIC PREGNANCY*

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Ectopic pregnancy has been chosen as the subject for this paper in the hope that it will prove of general interest, inasmuch as this condition is encountered not only by the surgeon, but also by the physician and the general practitioner.

Keen[1] defines ectopic gestation as "A pregnancy in which the fecundated ovum develops outside of the uterine cavity".

The history of the recognition of this condition, and the evolution of its surgical treatment is of interest. Albucasis, an Arabian physician of the eleventh century, is credited with being the first to recognize and describe a case of extra-uterine pregnancy. Hamilton's "Midwifery", published in 1789, contains the following paragraph:

> Instances sometimes—though rarely—occur of fetuses remaining in the ovarium or tubes or where the fetus grows to the outer side of the womb, or to some of the neighboring parts. These fetuses are generally of small size and die at an early period. They are often discharged by abscesses through the skin of the belly or by stool.

Heath's translation of Baudelocque's "Midwifery", published in 1790, says:

> It is extremely rare that an extra-uterine pregnancy arrives at its full period so happily as a common one, especially so where the child is in the tube, as the size of the canal being very thin, cannot expand sufficiently to contain it and besides does not receive blood enough to furnish what is necessary for the development of the child and the placenta. The greater part of the fetuses found in the tubes or ovaria have not been larger than those of three or four months usually are, and often still smaller.

After mentioning some exceptions he goes on—

> It seems notwithstanding these exceptions, that the tube cannot be developed beyond what is necessary to contain a child of three or four months. It is at that epoch that it usually perishes, after which it withers or putrefies. Sometimes also the tube bursts and lets it fall into the cavity of the abdomen, where it soon undergoes the same alteration. The fate of the woman in all these cases is different, according to that which affects the child. She may live a long time, even without having her health much injured, when it withers or in some measure putrefies but she soon feels the effects of its putrefaction when that takes place.

A later paragraph:

> If the efforts of nature alone have sometimes saved the life of the mother in extra-uterine pregnancies, though at the same time exposing her to a thousand dangers, or at other times she has been entirely indebted for that advantage to the assistance of art, how many evils might that assistance, always too late for the child and often for the mother, have prevented, if surgeons had been less timid in proposing it, or if they had met with women sufficiently courageous to submit to it in time. The opening of the abdomen and the tube, according to circumstances, at the same time that it would have snatched some of these women from certain death, might have saved many of these children conceived out of the proper place.

It is interesting to note that neither of the authors quoted seems to have recognized the early ruptured ectopic with internal hemorrhage as it is seen most commonly today; and also that Baudelocque strongly advised operation even in 1790.

An American translation of Cazeaux and Tarnier's book on midwifery published in 1884, points out the fact that the condition frequently terminates by the rupture of the cyst at an early age, causing hemorrhage and death of the mother; and that the fetus does not generally survive after the fourth or fifth month, even though the mother does not succumb. In Eden and Lockyear's "System of Gynecology", the frequency of early rupture and hemorrhage is emphasized. To quote:

> The majority of cases of tubal pregnancy come under observation at the time of rupture or abortion and this is usually at some period between the fourth and twelfth week.

According to Whitridge Williams, W. W. Harbart in 1849, was the first to suggest laparotomy for the purpose of arresting hemorrhage from ruptured tubal pregnancy, and Stephen Rogers wrote in 1867, "The peritoneal cavity must be opened and the bleeding vessels ligated".

Publishing his work on extra-uterine gestation in 1876, Parry argued the need for operation; but to adopt the suggestion and successfully operate for this condition was first accomplished by Lawson Tait in 1883. Two years before, in 1881, he had been earnestly solicited to operate for this condition by a physician who had correctly diagnosed a case of rupture with internal hemorrhage. Tait at this time refused to operate, and the patient promptly died. Unfortunately, the first patient he did operate upon died also; but his change of heart was complete. He correctly attributed this death to his own technique, which he changed. He continued to operate upon all such cases with the result that out of the next forty cases there was only one death. This brilliant record forced the medical fraternity to recognize the necessity for operation in these cases.

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Ectopic gestation may occur in either the ovary, tube, or abdomen; the tubal being a primary form, the abdominal variety practically always secondary to rupture or to tubal abortion, while the ovarian may be either primary or secondary.

Bonafide cases of ovarian pregnancy are exceedingly rare, less than sixty authentic cases having been published.[10] There are two commonly accepted theories of ovarian gestation.

1. That the spermatozoon enters a very small opening into the Graafian follicle before the escape of the ovum, or,

2. That the spermatozoon may enter an old ruptured follicle into which another follicle subsequently ruptures, and there fertilizes the ovum.

These are the two theories accounting for primary ovarian pregnancy; while a third theory, accounting for secondary ovarian gestation, is advanced by Sutton[2] of the service of Dr. John A. Sampson. It is that a pregnancy situated in the ovary may have been primarily in the tube, tubal abortion permitting it to escape into the ovary where it is retained.

Spiegelberg[3] in 1887 outlined the criteria necessary to establish a diagnosis of ovarian pregnancy:

1. The tube on the side of the pregnancy must be intact.
2. The fetal sack must occupy the position of the ovary.
3. The ovary must be connected to the uterus by the utero-ovarian ligament.
4. Definite ovarian tissue must be found in the wall of the sack.

While the foregoing criteria stand, a few less imperative requirements have been suggested:

1. The embryo must be visible in the cavity of the gestation sack.[4] While this is sometimes found in pregnancies of sufficient duration, in the majority of cases the embryo rapidly disintegrates, due to early termination of the pregnancy. An embryo was not found in twenty-four of the forty-three cases reviewed by Hunter.[5]
2. There must be placental tissue within the ovarian stroma.[6]
3. The tube must be free from any evidence of gestation as well as being intact.[7]

Primary abdominal pregnancy, if it occurs at all, which most observers doubt, could only develop through the presence of Mullerian tissue in the peritoneum, which would have to predicate the hypothesis of "Congenital Rests". Jacquin[8] in reporting a case, reviewed the entire literature and considered as authentic only those cases reported by Richter, Czyzwicz, Kohler and Walker.

Secondary abdominal pregnancy, however, occurs whenever an embryo extruded from its primary location in ovary or tube, retains enough of its placental attachment so that its circulation is not too greatly interfered with. A new sack wall may now be formed by the parietes, the intestines, omentum, and pelvic viscera; and within this enveloping sack the live fetus may reach full term. Although the usual fate of small intra-abdominal embryos is absorption, at a later stage the fetus may suppurate, may mummify, may become skeletonized, or a lithopedion, or an adipocoere.

The course of an abdominal pregnancy where the mother survives the tubal abortion and the fetus lives, may closely resemble the course of a normal intrauterine pregnancy. The mother, however, is more apt to complain bitterly of the fetal movements; this added pain being caused by the pulling apart of adhesions existing between the surrounding viscera and the fetal sack. At or near term there are certain signs pointing toward an abdominal pregnancy:

1. Increased loudness and nearness of the fetal heart tones.
2. More definite palpability of the fetal small parts.
3. The fetus usually lies decidedly to one side or the other of the abdomen.
4. Vaginal examination reveals a uterus usually about the size of a three months pregnancy; separated from the fetal mass. This is often extremely difficult to determine, even when the examination is done under anesthesia.
5. The placenta can often be felt, and Hayd[9] and Potter[9] report two cases in which it was mistaken for a fibroid.
6. Finally, false labor may set in when the fetus has reached term; and the pains may be strong enough to cause a bulging of the perineum. This is followed by the death of the fetus and cessation of the pains, and gradual decrease in the size of the abdominal tumor. The final termination of the case is by mummification, suppuration, adipocoere, or lithopedion formation; unless operative intervention is undertaken.

Clinically, practically every extra-uterine gestation begins, at least, as a tubal pregnancy. The products of conception are usually located in the central portion of the tube; occasionally in the ampullary end; and still less often in the uterine end of the tube, when it is called an interstitial or cornual pregnancy.

It is generally believed that the fertilization of the ovum by the spermatozoon takes place either in the Graafian follicle or at the abdominal extremity of the tube; the fertilized ovum then finding its way into and through the tube and

into the uterus by means of the wave-like motion of the cilia of the tube, causing a current of fluid down the lumen of the tube. The immediate cause then, of a tubal pregnancy can be anything which delays or hinders the passage of the fertilized ovum into or through the tube. Some of the more common causes are given as:

1. Obstruction from without the tubal lining; as peri-tubal adhesions, peri-salpingitis, or pressure from tumors.

2. Obstructions from within the tubal lining; as salpingitis destroying the epithelial coat with its cilia; extensive inflammatory destruction of the muscular structure of the tube decreasing its peristaltic action; inflammatory destruction leading to stenosis; infundibula in the tube, either congenital or acquired through inflammation.

3. Growth of the fertilized ovum outside of the tube to a size incompatible with its passage through the lumen.

Whatever the cause, the sequelae are either:

1. An early death of the ovum with complete absorption and complete restoration of the tube to its former state.

2. Death of the embryo with formation of tubal mole.

3. Tubal aborption, or extrusion from the ampulla.

4. Tubal rupture, which may be either extra- or intra-peritoneal. If extra-peritoneal, the rupture is into the broad ligament, which is distended by the hemorrhage until the pressure within the folds of the ligament antagonizes that within the vessels, thus arresting the hemorrhage. However, the broad ligament may become so tense that it ruptures in turn, causing what is known as a secondary rupture, in contradistinction to the primary rupture or the original rupture of the tube. A cornual or interstitial pregnancy may rupture either into the peritoneal cavity; or more rarely the uterine end of the tube may dilate, allowing the escape of the embryo into the uterine cavity, where it either continues to develop as a uterine pregnancy or else is cast off as a uterine abortion. The most frequent type of rupture is the intra-peritoneal, and is one of the most grave accidents of ectopic gestation, the internal hemorrhage usually being very rapid and severe.

The symptoms of ectopic pregnancy vary according to the stage to which the gestation has progressed. Prior to rupture there is intramural extravasation only, and internal hemorrhage has not yet occurred. The first symptoms differ very little from those of ordinary intra-uterine pregnancy. The woman has a cessation of menstruation and the ordinary symptoms indicating pregnancy. As the gestation enlarges tubal distention and peristalsis causes colicky pains and a sensation of more or less discomfort on one or the other side of the pelvis. The peristaltic waves in the tube stimulate uterine contractions which cause uterine bleeding which as a rule does not clot. On bi-manual examination the cervix is found somewhat softened, and very tender to upward pressure and motion; the uterus slightly enlarged; the offending tube is enlarged and very tender to pressure; and the vessels in the broad ligament pulsate with much greater force than those on the opposite side.

At the time of rupture there are the added symptoms of varying degrees of shock and of internal hemorrhage; and it is sometimes hard to make a differential diagnosis between a ruptured ectopic pregnancy and other acute lesions of the abdomen. A careful history is most important. There has been delayed or disturbed menstruation plus the symptoms of the first stage enumerated above; and these then followed by severe sudden stabbing pain, or pain of a tearing agonizing character. As the hemorrhage proceeds there develops faintness, fainting spells, or a sudden sensation of weakness, and the presence of more or less shock as shown by the blanched face, rapid and feeble pulse, short labored respirations, and cold extremities. As a rule there is only a slight elevation of body temperature and but a moderate leucocytosis. Often a severe reflex phrenic shoulder pain is bitterly complained of, due to the accumulation of blood in the sub-diaphragmatic spaces. Occasionally a diamond shaped area of ecchymosis is seen about the umbilicus if the intra-abdominal hemorrhage is large—Cullen's Sign, reported in 1918; although this discoloration may accompany other intraabdominal hemorrhages, and when seen after the rupture of an ectopic pregnancy it is a late sign.[12]

If the patient survives the shock of the rupture and the attending hemorrhage, a few days later when the watery portion of the blood has been absorbed, examination may reveal a well defined tumor consisting of the clotted portion of the blood walled off by plastic adhesions. The tumor may be in the culdesac of Douglas, or in one or the other broad ligaments. In such an instance the temperature would be sub-normal at first and slightly elevated later.[1]

The treatment of ectopic pregnancy is now universally recognized as being surgical. In the first stage, before rupture has occurred, opera-

tion should be performed at once; the only argument being as to the type of operation which is to be done. It has been argued that because of the possibility of a future ectopic in the adnexia of the opposite side, that these should be removed as a prophylactic measure during the operation. However, Phaneuf[13] and others have gathered data to show that women who have been previously operated upon for ectopic gestation, subsequently develop a greater proportion of normal uterine pregnancies than they do of repeated tubal pregnancies. Dietrich, reported by Deaver[15], found a recurrence of only 4.68 per cent reported out of 4,526 cases of tubal pregnancy. Phaneuf[13] therefore states that when operating for ectopic gestation the opposite adnexia should be removed only if they are found to be diseased; and should not be removed even then if there has been a severe hemorrhage. By way of illustration, the following case is reported:

Mrs. H. Z. C., age twenty-eight, whose family history was irrelevant and whose past history contained nothing of interest except an attack of appendicitis seven years previous, aborted her first pregnancy at five and one-half months, on October 15, 1922. The menses were re-established twenty-eight days later, and were regular and free from pain in November and December, 1922, and in January, February, and March, 1923. The next period started on April 8, five days late, and was accompanied by dysmenorrhoea. For the next ten days the flowing continued, and the pains localized low down in the right pelvis, although they did not assume an extremely severe, cramp-like character until the night of April 17.

At that time physical examination showed a slight rigidity of the right rectus muscle, slight dullness of the right lower quadrant of the abdomen, and marked tenderness to pressure over the right pelvic brim. Vaginal examination revealed a uterus slightly enlarged and moderately tender; and an exquisitely tender mass the size of a small lemon, in the right tubo-ovarian region. The temperature was 98 and the pulse 72. A diagnosis of unruptured right sided tubal pregnancy was made, and the patient prepared for operation.

On opening the abdomen, there was a moderate amount of blood in the pelvis, which had been extruded from the ampullary end of the tube. The tube was the size of a lemon, and at one point was almost ready to rupture, there being a pouched-out place the size of a pea. The right tube was removed; the right ovary, left tube, and left ovary were all normal, and were not disturbed. A long, sub-acute, retrocecal appendix, containing a fecal concretion, was then removed; and the abdomen closed without drainage.

Recovery was uneventful, the patient leaving the hospital in good condition on the twelfth day. One month after the operation, on May 18, 1923, the menstrual function was reestablished; and was normal in every way until the patient became pregnant again in January, 1925, missing her February period. She is now in the fourth month of a perfectly normal intra-uterine pregnancy.

Conservative surgery has been successfully applied to the pregnant tube before its rupture, in selected cases. Ramsay[14] in the "Proceedings of Royal Society of Medicine" advocates, where possible, conservative salpingotomy instead of the usual salpingectomy. He reports a case of removal of the left tube and ovary for a ruptured ectopic pregnancy in 1918, the patient developing a subsequent tubal pregnancy on the right side two years later. This was diagnosed before rupture and a conservative salpingotomy was followed three years later by a uterine pregnancy terminating in a normal delivery.

Treatment at the time of rupture consists, of course, in arresting the hemorrhage, for this is the real executioner. Authorities differ as to the advisability of operating while the patient is in shock. Deaver[15] believes that an immediate operation detracts nothing from the chances, but guards against imminent danger; and asks, "Who is the man who will tell us in these cases where shock leaves off and hemorrhage begins to play the leading role?" Welton,[16] on the other hand, believes that all ectopics in shock should be given a trial to demonstrate what they can do by way of recovery. This he checks by blood-pressure readings every fifteen minutes. The blood-pressure should not be allowed to return to normal limits for fear of dislodging the sealing clot, thus causing a renewed hemorrhage and shock; but the rise under treatment is never back to normal limits in the moribund type of case with initial systolic pressure of 50 mm. or lower. Welton[16] has given the following rules based upon blood-pressure readings:

1. In a pressure that continues to fall in spite of treatment, surgery is imperative.
2. Any pressure that rises and then begins to fall calls for immediate surgery.
3. A pressure that rises and then remains stationary calls for surgery.
4. In a pressure that reacts to, at the maximum, 115 mm., operation is indicated.

All of this means that the best time to operate must be a matter of individual judgment in the individual case. When symptoms are bad and are getting worse, operation must not be delayed; the only time when temporizing can be justified is when symptoms are bad but are getting better.

After a tubal abortion or rupture with mild or unrecognized symptoms, secondary development of the fetus is shown by increasing size of the abdomen with more or less discomfort from pressure. There is the presence of a mass usually lying either to one side of or behind the uterus; and in the mass the extremities and body of the fetus can sometimes be palpated; and later the fetal heart tones can be heard.

The management of these cases sometimes becomes a serious question. The fetus of an ectopic gestation is so frequently mal-developed, and a continuation of the pregnancy is so dangerous to the mother, that as a general rule the abdomen should be opened and the pregnancy terminated at once; as it is undesirable that the mother should be subjected to the risks of the continuation of the pregnancy simply for the remote possibility of the preservation of a well developed child. If, on the other hand, the fetus has already nearly reached the viable age, it is permissible to wait the brief period necessary to give the child an opportunity to live.

In operating upon an abdominal pregnancy with a viable child, the danger of a living placenta must be considered. If the placenta is attached to coils of intestines or to large vessels, the hemorrhage incident to its removal is so frightful that it must be left in situ. The sac can then be packed with gauze, its edges united to the abdominal wound, and its treatment conducted extra-peritoneally. The pack remains in place for four or five days and is then removed little by little. This method is perhaps safer than the one sometimes adopted, of suturing up the sac after the delivery of the child, leaving it in situ and closing the abdomen in the hope that it will become shrunken and absorbed by nature.

Cases of ectopic pregnancy too often come as a complete surprise to the patients' physician. Whenever a woman reports that she has skipped a period, the physician should not be satisfied simply to book a prospective confinement case. A vaginal examination should be made, not that the physician can thereby positively diagnose the presence of an intra-uterine pregnancy thus early, but that the presence of an extra-uterine gestation may not be overlooked. While the occurrence of ectopic pregnancy can not be prevented, yet the tragedies attendant upon the continuation of the gestation can be averted by an early diagnosis of the condition and prompt operative treatment.

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Discussion

Dr. Emil C. Junger, Soldier—I cannot allow such an important subject to go by without discussion, for we who live in the eleventh district are interested in these things. While the subject of ectopic pregnancy has been well presented by Dr. Billingsley, I want to say that right around my own territory we do not stand for this condition, we have no ectopic pregnancies. However, when I had been in practice only a year or so, I was on one occasion called at an early morning hour to see a patient on whom the family physician had called the evening before, and he diagnosed a case of appendicitis. When I saw the woman the next morning I probably would have diagnosed the case as appendicitis, only there was too much shock and no rise in temperature. The woman did not think she was pregnant, but she was of a size which would indicate a nine months' pregnancy. I asked her when she had had her last "period", but she didn't know what a period was. In our territory the people pay no attention to little things like periods. Some of them don't see a period from the time they are married up to twenty-five years afterwards, so with them periods do not count. The essayist speaks about a mass in the pelvis, but in this case the mass was not in the pelvis. The woman didn't know anything was wrong with her, she worked hard, no mass or tenderness at all. After getting consent to operation, which took several hours, the only thing I could do in that early day was to drive the livery team home, procure a nurse and doctor from another town and get ready for operation. I went in and tied off the tube and removed it, leaving the clot in a very much exsanguinated woman. We got along all right in that case, with complete recovery. They had ten children before and have had two since. They have quit now, but have a whole lot of children around there all busy raising citizens for Uncle Sam. I do not know where all these records come from showing forty ectopic pregnancies. I have been at Soldier for twenty-five years and have seen the one case I have reported here. I don't know where you get them. Either these people are fooling when it comes to doing these things or else they have too much

time off, or in some other way things are not done properly. People raise corn and hogs around Soldier, are busy at work, and do these things at the right and proper time. Therefore we get along all right and have no ectopic pregnancies. Don't monkey with clelution.

Dr. M. J. Kenefick, Algona—Dr. Junger states that at Soldier the pregnancies are practically all intra-uterine. There is one county in this state that can beat the record of Monona county, and that is Bremer county. Dr. Kern is here and I have heard him report a great many of these cases.

Dr. L. C. Kern, Waverly—I think Dr. Kenefick remembers a paper I read at Dubuque at a meeting of the State Medical Society a number of years ago. At that time I realized the fact that ectopic pregnancy was a condition that was not being recognized, and I collected the cases in my own practice and in that of my friend, Dr. Rohlf of Waverly, and there was considerable comment at that time about the number of cases we reported. I am sorry to say that in our part of the state ectopic pregnancy is not yet being recognized as it should be, for the reason that within the last two years in one case that I was called to see in consultation, the two doctors were treating the patient for gall-bladder trouble when she had an ectopic pregnancy. In another case that came to operation the diagnosis of typhoid fever was made, and in the third the doctor in charge insisted that I was rather impertinent when I told him that he had a case of ectopic pregnancy, saying, "Doctor, how dare you come into my presence and dispute my diagnosis?—this woman has nothing but ileocolitis". I suggested to the Doctor that we take the patient to the hospital, when I would show him what was the trouble. She had a ruptured ectopic pregnancy. Therefore I was glad to see this paper on the program, and I want particularly to commend the essayist for one or two statements. First, in making the diagnosis we should primarily get a real history. That does not apply only to ectopic pregnancy, but to anything that comes to the hands of the physician. If there is anything in regard to which we as physicians are dilatory, it is, first, that we are not getting a real history and writing it out; and, second, we are not making a thorough physical examination. We should not make this examination through the clothing, but on the bare surface of the patient's body. The history alone often makes the diagnosis of ectopic pregnancy. The last case I had in my hands occurred only a few weeks ago, and one of the doctors from Clarksville, a graduate of Northwestern University and in practice over twenty years, told me that was the first time in his practice he had made that diagnosis, and he made it on the history alone. And this was the first case in which I have known of no vaginal hemorrhage at any time. I have had between forty and fifty of these cases, and all had vaginal hemorrhage. If you will get a thorough history of any case where the woman has missed one or more menstrual periods, the diagnosis of extra-uterine pregnancy will be easily made.

Dr. Albert E. Conrad, Decorah—It has been my privilege to have some experience with ectopic gestation. The condition is not so common that we will see a large number of these cases in a limited practice in country towns, but I have seen them in city hospitals and several in our town of 4,000 people. The point I wish to bring out from my observation is this: That in tubal pregnancy the history, as Dr. Kern has pointed out, is very important. I have not had any experience with ectopic pregnancy, but in all cases of tubal pregnancy that I have seen there has been Neisserian infection either in the man or in the woman which has not been treated. It has been my experience that in a community such as Dr. Junger has referred to, wherein he has seen only one case, the people are very clean. The larger the place the more Neisserian infection we are liable to come in contact with and the more tubal pregnancies we are apt to see. Am I right?

Dr. W. E. Baker, Des Moines—Ectopic pregnancy is a very serious condition, and, as has already been said, its early diagnosis is most important. The matter of careful history-taking has been admirably set forth by the essayist, but 90 per cent of the cases we never see until after rupture or hemorrhage has occurred. There is one point in the diagnosis after rupture has occurred which has not been mentioned here, but which has been very helpful to me, and that is pain about the rectum. Practically every patient who has had a hemorrhage will complain of pain in the vicinity of the rectum in addition to the symptoms mentioned here, and I think it is a very important point in differentiating these cases.

Dr. Paul E. Gardner, New Hampton—I just want to lay a little stress on the symptom of pain in these cases. I remember one case in which I had delivered a patient in July, and in the latter part of October, as she was coming from the barn to the house, all at once she felt as though she was shot, fell down and had to be carried into the house. We made the diagnosis on the pain. What else could it be? She was so tender one could not touch her. At first, because she had been delivered about three months before, I thought we might be wrong. Dr. Kern spoke of the symptoms of severe pain, and that is the point that helped me on the diagnosis of this case.

Dr. Harold A. Spilman, Ottumwa—The case cited by Dr. Gardner reminds me of a case reported by a friend of mine. He operated for ectopic pregnancy with good results, and within a period of four or five months was obliged to operate on the same patient for a second tubal pregnancy, and in which it required considerable courage to make the diagnosis and perform the operation.

Dr. Billingsley—Dr. Junger has referred to the fact that appendicitis and ectopic pregnancy are often confused. I simply want to emphasize that point, because it is one of the most common errors in diagnosis to mistake an ectopic pregnancy for appendicitis. I believe that this mistake would not be made if the physician would be sufficiently interested to make a vaginal examination, because in

any vaginal examination that I have made there is nothing that will produce the excruciating tenderness that upward pressure upon the sac of a tubal pregnancy will cause. There is no mistaking the pain caused by this condition and that caused by an appendiceal abscess, there is no comparison between the pain that is caused in the two conditions. I was glad to hear Dr. Gardner mention the case of ectopic pregnancy following so soon after a normal labor. In the matter of taking the history the older writers emphasized the point that ectopic pregnancy usually came after a period of five or six years of sterility. That has not been my experience in these cases. My last case of ectopic pregnancy, which occurred about a month ago, was in a woman whom I had delivered of a normal child the latter part of last September. The point that Dr. Baker makes regarding pain about the rectum is a symptom that has not been present in any of the cases I have seen. One thing I did not mention in the paper because of lack of time, and that is some of the queer cases that occur. For instance, cases of double ectopic pregnancy have been reported. I found a report of one case of pregnancy in each tube and in the uterus, all three at the same time, one of the unusual freaks of medicine that sometimes may be seen. Dr. Conrad spoke of the prevalence of Neisserian infection as a cause of ectopic pregnancy. I brought out in the paper the point that previous infections were very frequently the cause of this condition. I know also that this phase of the question has been a matter of dispute. One observer in Mississippi had quite a series of cases and stated that he had never seen a case of ectopic pregnancy in which the other tube was anything but normal. In the last two cases I operated the tube on the other side was normal. I am well acquainted with both families, and as far as I know gonorrhea has not been a factor in those cases.

ESSENTIALS IN DRUG THERAPY*

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After a personal experience of many years of disease and pain, Benjamin Franklin said: "He is the best physician who knows the worthlessness of the most drugs". Medicine was dominated for fifteen centuries by the polypharmacy of Galen. That cocksure and facile writer left fourteen books on therapeutics and thirty books on pharmacy. The plausibility of his theories has never been equaled, except perhaps, by the writers for some of our present day pharmaceutical houses. Galen was discredited three hundred years ago, but we still cling to many of the therapeutic fetishes of the past. We take pride in the advancement of medical knowledge during the last fifty years, but how can we reconcile that pride with the fact that the last edition of the U. S. Pharmacopea contains a list of 782 drugs, substances, and preparations, and that the National Formulary, still extensively used, contains many more. We have no right to shift the blame for the long list in the Pharmacopea upon the revision committee of that very useful book. Most of them are able men, striving for simplicity. The last edition contains about two hundred less substances than the preceding one. The medical profession and the manufacturers are largely to blame for the extended list. But imperfect as it is, the Pharmacopea is the best reference list we have of the older drugs. We commit crimes far greater than the use of too many of its listed preparations. I refer to our use of many drugs and preparations foisted upon us by pharmaceutical houses under their own pet, and often therapeutically suggestive, names.

We owe a great debt to the modern manufacturing pharmacist who has made many of our useful drugs more potent and more palatable, has aided in standardization of strength, and has cooperated with medical men in perfecting some of our new and important drugs. Examples of this are the accurately standardized preparations of digitalis, and greater perfection of the arsenobenzol preparations, and of insulin. But how can we excuse ourselves for the existence and use of hundreds of drugs, some old and some new, some said to acquire rare virtue by the special method of combination of the manufacturer, some said to acquire new power by way of the new fad of intravenous administration, and about which little of value is known regarding any of them except the hectic claims of the manufacturer? Some of these manufacturers consider our thralldom so complete that they do not take the trouble to give us the formula of their mixtures. We are supposed to belong to a learned profession, capable of doing our own thinking, but we sometimes exhibit a credulity regarding cures almost equal to that of the laity, and on little more basis. A new patent cure-all is heralded in the newspapers, is prominently displayed by some of our drug stores, and is sold for a time in carload lots, only to give place in a few months to a newer and greater nostrum. We criticize our friend, the retail druggist, for being a party to such frauds. But doctors are not always free from cause for censure. A representative of a drug house calls on the doctors in a community with his samples and seductive literature, and for a time the druggist is deluged with prescriptions for that particular preparation. The druggist stocks up on it, but finds later that the preparation is dead

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stock and must give place to a newer fad in prescribing. We cannot hope to gain the respect and cooperation of the druggist so long as such practices continue. These are serious charges. I do not mean to imply that the majority of physicians routinely follow such practices, but few of us can plead "not guilty" to at least occasional indulgence in therapeutic vagaries. It is time that we took stock of our therapeutic knowledge and indulge in a house cleaning. Go over critically the list of drugs used and throw out the rubbish. Retain only those of proved value.

Our slovenly use of drugs is surely not due to a deliberate desire to be inefficient. All of us want to help our patients. Neither is it due to a lack of drugs of known value. It must be due to a lack of knowledge regarding the uses and limitations of drugs in disease. This takes us back to the methods of teaching therapeutics in our medical schools. It is unnecessary to give an extended discussion of that phase of the subject here. For a clear and common sense discussion of the treatment of disease in general, and of better methods of teaching the use of drugs, you should read Osler's chapter on "The Treatment of Disease" in the Oxford System of Medicine. It is a classic, and should prove an inspiration to every doctor who reads it. It seems self-evident, however, that therapeutics is not given nearly the time and attention that its importance deserves. As students in medical school and during our service as internes, the clinical teachers very properly devoted a great deal of time to diagnosis. But in practice we find that the patient comes to us for something more than a diagnosis. He wants relief from distressing symptoms and, if possible, restoration to health. Our training in pharmacology has given us a knowledge of the action of a few drugs on isolated organs in the lower animals. In physiology we learned something of the normal processes of the circulation, of respiration, of digestion, of muscle action, and of their control by the nervous system. In pathology we learned to recognize the gross and microscopic changes in disease, most often as the end-result of disease. In therapeutics we were taught something of the action, therapeutic uses, preparations and dosage of a very large number of drugs, and often without sufficient stress on the very much smaller number of really useful ones. But all this knowledge is inadequate to enable us to properly treat a case of pneumonia, or meningitis, or chorea, or syphilis, or high blood-pressure with damaged kidneys and failing heart muscle. No medical school can turn out finished therapeutists, for all therapy is more than a science; it is also an art. It would appear that the schools might devote more time to the art of visualizing the sick patient as a whole, and to coordinating these various sciences in their application to treatment.

But at best the schools can teach little more than principles. There must be more than teacher and instrument to make a musician. There must be study and practice by the student—long hours, and even years of patient and painstaking practice before anything approaching perfection can be attained. And so it is in the treatment of disease. The sick patient is the instrument upon which we try our skill. Every tissue, and organ, and their chemical components are the notes upon which we must play. In involvement of one organ or function we play chiefly upon that note; in case of derangement of another structure we play upon another note; in one case we may strike the notes softly; in another, with all our power, but all the time we are watching and guarding other structures and functions, so that our efforts on the whole may produce the harmony which is health. For rarely is a single structure or function involved. Even though pathological changes may be confined to a single structure, the physiological balance of many other tissues may be disturbed.

Our task is to examine upon what principles we shall employ those remedies, be they few or many, in which we have faith. We must first make clear in our own minds what it is we have to achieve and how. There are two fundamentals in drug therapy; a proper understanding, first, of the reaction of the body itself to abnormal conditions, and, second, of the means by which favorable reaction may be secured or augmented by drugs. Dr. Paris, in his Pharmacologia says: "It may be laid down as a position which is not in much danger of being controverted that where the intent of a medicinal compound is obscure, its operation will be imbecile. But the intention must be obscure if we are unfamiliar with the fundamental principles which govern the combined actions of the several parts of the body."

In considering the first fundamental we recognize two principles. The first of these may be styled the principle of physiological balance, the power of the organism to resist disturbance and to revert to its state of equilibrium so soon as the disturbing force is removed. Whenever symptoms appear, general or local, it is manifest that physiological balance has been overcome, and the system has passed from health to disease. We are coming to recognize more fully the importance of this principle of disturbed physiological balance in which pathological changes are not yet demonstrable. Examples of this are the many

functional diseases or disturbances with which we have to contend. The second principle may be termed the pathological balance of the tissues, and it reveals to us the power of the organism as a whole to adapt itself to a distinctly morbid influence, and to strike a new balance, which is not that of health but which is the next best thing to it. This lower balance is also more unstable, and a very tentative procedure in all forms of treatment is necessary, for it is difficult or impossible to gauge the degree of instability present. These cases, usually chronic, are frequently marked by the presence of some one or other symptom which, arising in a healthy organism would at once be recognized as a morbid departure and forthwith actively attacked, but which existing here as a symptom of long standing, must be regarded rather as a factor in the pathological balance, and as such to be severely let alone. For example, a patient comes to us with the complaint that he passes a gallon of urine daily. Upon investigation we find that this is due to arteriosclerotic kidneys. We know that in this condition the kidneys are unable to concentrate the solids that are normally thrown out by those organs, and any attempt to markedly lessen the volume of fluid output, would result in retention of solids and soon end in disaster.

We now come to a consideration of the second fundamental; that is, the means by which favorable reaction to disease can be secured or augmented by drugs. To be successful here we must know the natural history of disease. We must know the processes in that disease that produce destruction and death, and also the processes that must be enlisted to guard against and prevent it. We must recognize also that in many diseases, as we see them, destructive processes beyond repair have already taken place and that our efforts can only be directed to the prevention or delay of further destruction, and conservation of what remains. If we do not face this fact frankly with ourselves and with our patients, we shall bring ourselves and our profession into disrepute. I shall quote here some observations by that master therapeutist, Sainsbury, from his "Principia Therapeutica", written almost twenty years ago. "If now you ask me, but can you aid and abet the processes of life, I will answer, medicine aims only to range herself on the side of life by seeking to establish those conditions most favorable to life. These conditions, physical, chemical, or physico-chemical, must be capable of modification by those agents, physical, chemical, or physico-chemical, which constitute our materia medica, and which we bring to bear upon the body. We class our medicines as soporifics, as cardiac tonics, as cholagogues, and so forth, but there is no drug which contains a grain of sleep, though we have many that will assist the tired cell; neither have we any heart tonic which can do more than facilitate the contractile powers of the muscle fibers, it brings with it no contractility *per se;* no cholagogue ever did more than promote the bile forming activity, only the hepatic cells being able to produce bile. We may be able to modify, increase or diminish, the internal workings of the several organs themselves, also the inter-action of these organs one upon the other, but with this we reach the limit of our powers; we can establish nothing new".

The natural tendency of the body to revert to normal, makes difficult the evaluation of any treatment. Here we should be ever critical; not pessimistic, but ever on guard that we do not deceive ourselves. It is not enough that under certain treatment the patient recovers. We must demonstrate that recovery has been more complete or more speedy than it would otherwise have been.

But we do know that many disease processes can be favorably influenced by drugs; in some instances that influence is discouragingly small, in others it is happily great. We know that in several of the infectious diseases we have specific drugs which destroy the cause of the disease or neutralize its toxic effects. These are truly life saving drugs. So far, the biologicals furnish us the greatest number in this group. Though we have reason to believe that list will be somewhat extended, it seems unlikely, in the light of our present knowledge of immunity, that antitoxic sera will ever be produced for every form of bacterial disease. The field of the so-called vaccines seems very definitely limited to the prevention of a few bacterial diseases, and to the treatment of chronic, and particularly localized, infections. Here, again, our knowledge of immunity renders their employment in acute infections illogical. During the last few years attempts have been made to produce chemicals that have a selective toxic action upon bacteria and protozoa, and without a seriously toxic action upon the body. The arsenobenzol preparations are the most striking success in that field. Whether the modus operandi in chemo-therapy is really chemical, or whether, as suggested by Martin Fischer, it may be physical, is not of immediate moment to us. We look forward with hope to its further development. In a few of the infectious diseases, tuberculosis for example, the nature of the pathological process is such that striking benefit is not to be expected from any drug. There is another group of diseases in which we employ drugs that

in some instances exert a specific effect. These may be termed deficiency diseases. Examples of this are the effect of iodin in goiter, iron in certain forms of anemia, thyroid in cretinism and in myxoedema, and insulin in the more severe degrees of diabetes. We can temporarily but powerfully add one or more of the effects of pituitary and suprarenal secretion. To a limited degree we can substitute for deficient ovarian secretion and for deficiency of perhaps two digestive enzymes. But because of this the manufacturers have no right to try to force the conclusion that we can substitute for deficiency of every known gland and tissue. Studies in blood chemistry have shown us how we may at times profitably alter the chemical constituents of the body fluids. And, finally, we have drugs by means of which we can stimulate or depress many of the structures and functions of the body. In the use of these, particularly, the art should go with the science. Science teaches us the sequence of physical events that occur when the circulation is improved by digitalis, but only the art can tell us when to stimulate the heart, and how much, and how long. Science tells us that in a case of acute pleurisy, opium will afford relief from distressing pain and cough, but only art can tell us how far we may use it without unduly depressing vital functions. Rest is one of the most important factors in the restoration of disturbed balance, and a whole chapter could be devoted to the value of drugs in its promotion. Here again the art must guide us in the selection and administration of our drugs.

Our therapeutic knowledge will undoubtedly increase. There will be valuable new drugs, and further investigation may show increased or lessened usefulness for some of the older ones. Before accepting the new ones let us consider whether the claims made for them are consistent with known facts regarding disease processes, let us make sure they have the approval of the Council of Pharmacy of the A. M. A., let us consider the character of results in their uses that appear in the literature. Then we may properly decide whether the new drug is worthy of a trial in comparison with older ones. Likewise, before discarding the older drugs we should not always rely entirely upon laboratory investigation. The findings of the pharmacologist do not always fall in line with the experience of the therapeutist, and we should use caution in our deductions from the results of experiments upon isolated organs. Careful clinical observation, even though empirical, is still worthy of consideration. Quinine was effectively used in malaria, and mercury in syphilis, long before their mode of action was known.

We will never all employ the same remedies for each particular abnormal condition. It is not necessary that we do. For there are several drugs of similar action and there may be various routes for attack. The task for us is to make clear in our own minds what it is we have to achieve and how, and upon what principles we shall employ those drugs, be they few or many, in which we have faith. For, as Osler has said, "Without trust, without confidence, without faith in himself, in his tools, in his fellowmen, no man works successfully or happily. For us, however, it must never be the blind unquestioning faith of the devotee, but the confidence of the inquiring spirit that would prove all things".

Discussion

Dr. Robert L. Parker, Des Moines—When a physician is called on to guide a patient through a serious illness, he should be a constant watchman, and a therapeutist as necessity arises. A therapeutist is one who, having pure drugs, knows when to use them, how to use them, and, of equal importance, when not to use them. That is, I believe, a quotation from one of our greatest teachers in therapeutics. These points have been admirably covered by the essayist. First, let us consider the question of pure drugs. What better standard can we have for determining the purity of drugs than that set by the U. S. Pharmacopeia and reports of the Council on Pharmacy and Chemistry of the A. M. A. The first Pharmacopeia was published entirely by physicians, and the first revision in 1830 was by physicians. From 1830 to the present time physicians have taken a little less interest in the revision of the Pharmacopeia. The present revision committee is composed of fifty men, seventeen physicians and thirty-three pharmacologists and pharmacists constituting that committee. It is our own fault that we do not take greater interest in this work. The A. M. A. has taken advantage of our neglect and have appointed a special committee to edit and publish an Epitome of the Pharmacopeia. The last edition of the Pharmacopeia was an admirable reference and text-book for the average physician. The tenth revision of the Pharmacopeia will come from the press some time this summer. No doubt the revision committee of the Epitome will also have a new volume in hand, and I strongly urge upon every practitioner of medicine to have upon his desk that little volume which can be procured from the A. M. A. It is absolutely reliable and you are then able to know the purity of your drugs. Before using the nostrums that are put out by pharmaceutical houses, first consult that little book and find if the purity of a certain preparation has been determined by this committee. I heartily congratulate Dr. Crow upon his admirable paper. I am thoroughly in sympathy with him, not only because of the interest which I had for many years on the pharmacy side, but also due to my activities on the medical side in later years.

CONSERVATION OF UTERUS IN PROLAPSE*

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Any operation which has to do with conserving the uterus in prolapse should take into consideration the causes, and the anatomical defects as related to the normal.

Failure of operative procedure, which has varied from hysterectomy, anterior vaginal resections, perineorrhaphy, and even to closure of the vaginal tube, has been due to this fact. Failure, however, has produced an incentive for greater effort, with the result that anatomical relationship has played a greater part in operations as now given for cure of prolapse.

It would seem that with all that has been written, and the operative procedures described, that we should have some basic principle by which we could return anatomically, or as near thereto as possible, the uterus and its accompanying supports, without interference of function, producing at the same time a cure.

As well we should consider the aid and support which we will derive from interposition operations applicable at menopause and later, over the indiscriminate abolition of the uterus.

The majority of prolapse conditions are produced as the result of childbirth; particularly the severe bladder hernias, when the head has passed through the birth channel either assisted or unassisted before complete dilatation has taken place.

Prolapse may, however, occur without child bearing, that is, from natural weakness of supporting structures, atrophy of tissue, and as given by some the congenital deep culdesac, as a predisposing factor.

Dr. Daniel Jones, of Boston, considers the latter a cause for prolapse, and believes this explains the uterine prolapse in the virgin, as in his experience he has always found the deep culdesac present.

Whether this be entirely true or not, we do know that in these congenital deep culdesacs, when accompanied by prolapse and accompanying hernia that they are most pronounced, the hernia of rectum even coming down to the perineum.

The ages at which this may occur is given by Graves as rarely occurring before age thirty-five; others report it as occurring much younger, even as early as age eighteen.

As a result of these causes, we have a lower placement of the uterus, with enlongated cervix, or diseased cervix, obliteration of the anterior vaginal fornix, a downward displacement of the cervix, the hernia of the bladder and rectum.

Special points to be considered of the bladder, are that the trigome which is normally located at the anterior vaginal fornix, will not be found in this position, but instead you will find a much higher part of the bladder wall due to the descensus. This extreme condition was given special consideration by Schatz in 1903, and the cause being the passing of the fœtus before complete dilatation.

To the congenital deep culdesac special attention should be given; normally the culdesac in the fœtus extends down to the levator, with the depth gradually decreasing from this until puberty, at which time it reaches the level of the second or third sacral vertebræ. In the congenital deep culdesac the peritoneum may reach the perineum, and when present may, if not properly considered, be a cause for recurrence.

From my own observation, I have noted that with this type of case, the true pelvis in itself is very deep. I have been unable to verify this by literature at my command, but the thought is that perhaps with the congenital deep culdesac, this condition of the pelvis might have something to do with culdesac not being returned to the position designated as normal.

In some cases we will find on opening the abdomen, the symphysis lying bare, showing that from pressure this fascia has pulled away from its attachment. When present this should have special consideration.

With these conditions present, our next thought would be, what is the structural support of the diaphragm.

The old opinion that the perineum was individually a support for the uterus I believe we can eliminate by the fact that we can have a lacerated perineum without descensus of the uterus. I have seen this to be true, even in very elderly women. Again, you may have complete descensus and cystocele without accompanying lacerated perineum. So as to the perineum, I would consider it an aid as a whole in operative procedure.

Above the perineum we have, as a support, the endo-pelvic layer of the pelvic fascia, the pelvic fascia as described by Cunningham is a continuation fascia, briefly it springs in part from the back of the symphysis and pubic ramus, at about the level of the junction of the lower and middle thirds of the symphysis, the fascia passing under the base of the bladder is closely connected with the anterior wall of the vagina, and is continued backward to be attached to the supravaginal cervix where it helps to form the anterior vaginal fornix. This fascia is definite, and is sometimes

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spoken of as the anterior true ligament of the bladder.

The next part of the pelvic fascia arises from the pubic ramus and white line, first at the level of the top of the obturator foramen, and from the inner surface of the ischial spine. It now runs inward above the levator ani muscles toward the vagina, bladder, cervix and rectum, and divides into the vesical, vesico vaginal, rectovaginal and rectal layers. The vesico vaginal or anterior layer of fascia is much stronger than that of the rectovaginal. Suffice it to say that this fascia is distinct at its origin, and that as it is spread out at different levels in web shape as one might compare it, is capable of support, as well of dilatation, whereby if it were of single sheets, or solid sheet formation, dilatation would be impaired, and resultant damage more great.

For more complete detail, I would refer you to an article given by Gibbon Fitzgibbon, in which he has very ably discussed the pelvic fascia. His conclusions insofar as they will aid in this paper are that:

1. Prolapse of the uterus and cystocele are due to damage of the pelvic fascia in the region of the lateral fornices, and in front of the cervix.
2. Cure of the condition can be effected by reuniting the fascial diaphragm across the pelvis.
3. Fascial diaphragm can be repaired without interfering with the function of the uterus.

Diagnosis of the various conditions; I would suggest the terms, prolapse without vesical or rectal hernia, prolapse with one or both hernia present, and complete descensus with accompanying hernia; this taking into consideration the anatomical variance, and as well, more instructive as to operative procedure.

Diagnosis of the deep congenital culdesac is made by placing one finger in the rectum, and one in the vagina, now when the vaginal wall is pulled upon, the rectal wall does not follow as in simple rectocele.

The operative procedure in the childbearing period should as a whole be able to take care of the points as brought out, without loss of function; those points are, replacement of the bladder, reinforcement of the urethra, reforming of the anterior vaginal fornix, firm apposition of the fascia, and when present, attention given to the bare symphysis. Of the rectocele, importance should be paid to the filling in of the recto vaginal fascia, and when congenital culdesac is present, particular attention given to it.

The operation as described by Dr. Emil Ries, in 1918, I feel has special merit, because he has followed out the anatomical defects in the operation, with replacement as near to normal as possible, and as well, retained the normal function. Each step is a part in itself for conditions as they arise, and are met accordingly.

My own results, though limited, have been of the best with this operation, I am only sorry that I have not a great number of cases to report on so that I might more strongly emphasize the efficiency of it. It does hold, as evidence of one case of age fifty-eight, in which I intended to do the complete operation with suspension, but which I found out to be impossible, because I had sewed the vaginal wall too high on the uterus, as well removed too much vaginal wall. This case has had no recurrence after five years.

Ries reported one case that went through normal pregnancy. He operated on this case for ventral hernia, inspecting the parts, and found all as had been placed.

One patient going through pregnancy does not establish all the facts, but built up as the operation is, on basic principles, it should at least bear our consideration. In case of no future pregnancy he has modified the operation to meet this condition, and instead of the interposition operations, uses the ventral suspension. With this complete operation, he reports over 100 operations performed, with one recurrence, that of a diabetic patient, where the parts sloughed.

This operation as compared to the operations combining the plastic work with ligament suspensions through the abdominal wall, would at least surpass the danger of obstruction. Probably considering the number of ligament suspension operations performed, obstruction and complications may not be so great, but it is at least to be considered. Bevan recently reported three cases with this complication. The ligaments normally are not supports of the uterus, they are as one might term, guys, and do not support until so drawn upon by displacement.

However, it perhaps is not for me to criticise as these operations are followed by some of our best surgeons, and they class their results as invariably successful.

I would prefer in preference to ligament suspension operation, the ideas as expressed by Dr. Thomas J. Watkins, in discussing the operative procedures relative to this class of cases, that of free dissection and attachment of the broad ligaments in front of the cervix, similar to the method of Baldwin. This method, shortens the broad ligaments, thereby elevating the the uterus in the pelvis, increasing the antiversion of the uterus, thus lessening the intraabdominal tension upon the united sutures, lessening the tendency of the line of union to stretch, thus more surely insuring a permanent result. Dr. Watkins places

stress on the free dissection of the bladder, so that proper use may be made of the fascia.

Attachment of the fascia and vaginal wall to the uterus has an importance, that we in this way increase the strength of the union. This attachmen, however, should never go higher than the reflection of the peritoneum onto the uterus.

The use of the sacrouterine ligaments as a support is a disputed point, but at that I would recommend its use in certain class of cases, for even though it might not originally be a support, after stretching from displacement, to plicate them at the cervico-fundal junction, would be an added prevention for downward displacement.

Of the interposition operation applicable at menopause or later, the operation as described by Dr. Thomas J. Watkins in 1898, has seemingly stood the test; modifications have been made but the operation as a whole remains.

This operation places the bladder upon the posterior wall of the uterus, elevates the uterus by being tipped forward, the position being changed 180 degrees. This transposition produces a twist in the broad ligaments, thus shortening them and aiding in the correction of the prolapse. This position places the bladder and uterus antagonistic to each other, which aids in maintaining the correct position.

In review of the literature I find few criticisms of the operation as a whole, it is used in many of our best clinics as a basic operation in classified cases. Criticisms by some are that the addition of the routine use of the sacro-uterine ligaments should be followed, as this will aid in preventing recurrent prolapse of the cervix and uterus. Others report recurrent cystocele and prolapse, but do not say how high this would be in a given 100 or series of cases. From my own experience I would pass this on as a factor comparable to other operations that at the best we are not always perfect in our work.

Statistics as to recurrence on a given 100 cases range from 93 to 95 per cent cure; others on reports of fifty and sixty cases report no recurrence.

Watkins in speaking of reports from this country and foreign, says that the recurrences were very few, the most being that of prolapse of cervix and uterus.

It is evident from the description of what is done in the interposition operation, the advantage is over abolition of the uterus. In addition although it displaces the uterus, and curtails the normal function, it has made use of the structures of support, increased the support of the bladder, and made a more firm vaginal wall. Thus better withstanding the intraabdominal tension.

Since the advent of the Watkins' operation others have worked along similar lines, that of conserving the uterus. Kielland reports on 150 cases operated after his own operation, without any recurrence. This operation places the uterus in its entire length, on the anterior vaginal wall in a straight line, parallel to the vaginal axis, and the narrowing of the vaginal tube. This may have the added advantage over the Watkins, in that the use of the uterus in its entirety will give a more firm wall, and greater support against intra-abdominal tension.

It is not my aim to review all operations or the pros and cons of such, neither is it, to dictate to you which technique you shall use in the above operative procedure, but rather to suggest to you the basic principles which should be applied in operation, as well as to suggest that we treat each case individually, and not abolate the uterus indiscriminately. Cornell says that the most difficult cases of cure, are the recurrences following ill-advised hysterectomy, and with which I concurrently agree.

In conclusion; I desire to emphasize:

1. That operation when necessary in childbearing period is practical.

2. That properly performed plastic operation in no way prevents against subsequent childbirth.

3. That such patients will remain cured, as related to the cystocele and descensus.

4. That the interposition operation has a routine place at menopause and later.

5. That the uterus is the best possible support for the retention of the protruding cystocele.

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Discussion

Dr. Murdock Bannister, Ottumwa—I want to say that three or four of us are using this technic and are getting much better results than when we did the suspension operation. Years ago I did not understand the technic fully and did not do it as well. It is a very good operation and serves well in cases of prolapse where a suspension operation would otherwise be done.

Dr. Houston—I had hoped that Dr. Rowan might call me down on my ideas relative to the true pelvis. I am not in position to know much about it and wish to follow it up. The point is that in cases of severe laceration, after opening the abdomen we have a long way to go to get into the true pelvis.

CELIAC DISEASE*

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On account of the infrequency of celiac disease and my limited experience with it I have some hesitation in presenting the subject to this body. However I believe its importance is out of proportion to its frequency. It is easy to mistake it for one of the more common ailments, especially chronic colitis or tuberculous peritonitis. Furthermore its treatment is worthy of consideration; for, although it is too often an intractable condition, there are certain lines of treatment upon which the child's chance of recovery very largely depends.

Celiac disease is a form of chronic intestinal indigestion, characterized by extreme intolerance for carbohydrate and fat. Other terms applied to this condition in earlier years are celiac diathesis, diarrhea chylosa and diarrhea alba. More recent literature refers to it under such terms as chronic digestive insufficiency, intestinal infantilism, chronic fat indigestion, and fat intolerance. The disorder was referred to by earlier writers but first clearly described by Samuel Gee of London, in 1888. His description was immediately followed by that of Gibbons of Edinburgh. The literature of the next ten years contains nothing about it. From 1900 to date there have been several contributions from American writers, and a few from English and German clinics. The symptomatology observed by the various authors is sufficiently characterized to establish the disease as a clinical entity.

Gee's[1] original description of the intestinal symptoms which first attracted attention has not been surpassed. It is in part as follows: "There is a kind of chronic indigestion which is met in persons of all ages, yet is especially apt to affect children between one and five years old. Signs of the disease are yielded by feces, being loose, not formed, but not watery; more bulky than the food taken would seem to account for; pale in color, as if devoid of bile; yeasty, frothy, stench often very great. The pale loose stool looks very much like oatmeal porridge or gruel."

He considered it closely related if not identical with the endemic diarrhea alba or tropical sprue of India. He emphasized its occurrence in children between one and five years of age but recorded it as found in persons of all ages—but seldom in adults who had not been to India. A year later Gibbons[2] described several typical cases explaining it as a functional disturbance of the nervous supply of the abdominal viscera, with resultant indigestion and intoxication. Twenty-five years later George Frederic Still[3] of London again called attention to the clinical resemblance between the intestinal manifestation in sprue of adults and celiac disease of childhood for purpose of study but expressly did not assert the identity of the two diseases. Other writers who have mentioned sprue have pointed out the differences and dismissed them as separate entities.

In 1902 Bramwell[4] of Edinburgh, presented the theory of chronic pancreatitis with pancreatic insufficiency as an explanation of the disorder. He published three more papers in the thirteen years supporting his contentions with several patients with marked infantilism who had made remarkable improvement when fed pancreatic extract. While some of his cases may have been celiac disease it appears quite certain now that he dealt mostly with a true pancreatic insufficiency —a very different condition from celiac disease.

In 1903 Cheadle,[5] of London described several cases emphasizing the pallor of the stools and attributed the condition to lack of bile formation. The stools however are not uniform, bile is not necessarily absent in a white stool, and finally bile has generally been reported as present when fecal examinations have been made.

In 1908 Christian Herter,[6] of New York, published a monograph entitled "Infantilism from Chronic Intestinal Infection", in which he presented a series of pronounced cases of celiac disease. He was apparently unaware of any previous work on this subject and came to the independent conclusion that it was due to a chronic intestinal infection characterized by the overgrowth and persistence of bacterial flora belonging normally to the nursing period. He observed that during convalescence these organisms are gradually replaced by those commonly found in normal children—namely B. coli, B. lactis aerogenes. In con-

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junction with Graham Lusk and McCrudden, also of New York, he made extensive studies in metabolism which revealed a pronounced failure of fat absorption with consequent loss of fat in the stools and a sufficient failure of resorption of magnesium and calcium to account for the lack of skeletal growth which so characterizes this disease. Furthermore he describes a condition of acute or subacute infection of the intestinal tract in early infancy associated with the dominance of the same gram positive bacilli. This illness is characterized by great loss of strength and weight and was regarded by him as the direct cause of the disease which he called "intestinal infantilism". The work of Herter has not been proven by subsequent investigation. Poynton, Armstrong, and Nabarro[7] reported a series of nine cases in the proceedings of the Royal Society of Medicine in 1913 and emphasized a preceding gastroenteric infection as a probable cause. Their bacteriological researches yielded nothing definite. Nabarro made bacteriological investigations in some of Still's cases and found dysentery bacilli in three cases, streptococci, pneumo-bacilli and B. coli in one case.

Generally the disease appears in the second year. It is known to have occurred as early as eight months and as late as three and one-half years. There is no known relation to previous diet. It is not reported to have occurred during exclusive breast feeding. Any causal relation to any of the various acute infections which may have preceded it has not been established. Its occurrence is not associated with poverty, rather the contrary. Still has observed scurvy to precede it in a few cases and speculated upon the relation without conclusions.

The onset of the disease is very insidious. The first thing to arrest attention is likely to be chronic looseness of the bowels, or a tendency to periodic increases in frequency. Rarely is the stool watery. This is accompanied by a loss of strength, increasing pallor, irritability and failure to grow, if not an actual loss of weight. By this time the enlarged abdomen may have attracted attention. The temperature is normal or subnormay and the extremities cold and clammy.

The stool is commonly like an oatmeal gruel with an excess of mucus and shreds. It is generally copious and has a foul odor. The color suggests the absence of bile but chemical tests prove its presence. Usually there are three or four daily. There may be but one but even so the characteristic features are present. In a case under my care one of the chief complaints when presented for examination was constipation. The first stool passed after coming under observation was typical in character but during six months of observation there was neither constipation nor diarrhea. From 25 to 75 per cent of the solid matter of the stool consists of fatty acids, soaps and neutral fats. The stool appears greasy. The reaction is acid but may become alkaline on a diet which contains little fat or carbohydrate. Blood or pus are rarely present in the stool.

Failure to grow and fluctuations in weight are striking characteristics. The onset is likely to be accompanied by great loss, as much as a third of the body weight in three months. Relapses are also accompanied by marked losses—I have observed a child of twenty pounds lose as much as 1½ pounds in twenty-four hours. Poynton reported a child weighing 24 pounds at eleven months; 17 pounds at two years; 17¼ at three years, and back to 24 pounds at four years. There is a corresponding failure to grow in height. The long bones are retarded in development. Radiographs reveal delayed formation of ossification centers but there are no marked changes resembling those found in rickets. The muscles become flabby, the body and extremities are thin. In the limbs the emaciation is at first more apparent to the hand than to the eye—the loss of muscle tone being quite pronounced. These are in marked contrast to the face which remains relatively plump. Weakness, pallor, and increasing irritability are coincident expressions of failing health. A child who contracts this ailment before he is strong enough to walk may be delayed until he is three to five years old. The older child who is already walking is likely to lose that power for a period of several months to several years, depending on the severity of the disease and the care that he receives.

The pallor is dependent on secondary anemia which may be of severe degree, but generally is only moderate. Otherwise blood examination is normal.

The child is usually fretful and irritable when awake, but generally sleeps well at night. The mentality seems unaffected even though the body suffers great retardation. Some authors believe these children precocious. Others consider this an expression of environment since the nature of the illness subjects them to the constant care of adults and the exclusion of normal play with other children.

The abdomen becomes large, due to muscular relaxation, with gas and fecal accumulation. There are no palpable glands or other masses, no "doughy feeling" as in tuberculous peritonitis, nor any ascites unless it be an expression of general edema. Reports indicate that vomiting is an

infrequent symptom. It may be pronounced as in one of my own cases—a boy of one and one-half years who has vomited almost daily for six months. In this particular instance the vomiting may be a secondary nervous disturbance since every feeding has to be forced upon him.

The afebrile course of the illness is a significant feature. Commonly the temperature is subnormal. A child under my observation was not found to have normal temperature in a period of three weeks. Any fever is likely to mean some intercurrent infection. The heart and lungs appear normal. The urine is usually normal. Fluoroscopic examination of the gastrointestinal tract reveals nothing but an atonic bowel and dilated colon. Examination of gastric contents shows a deficiency of hydrochloric acid which is more marked when the symptoms of the disease are more pronounced.[11]

Characteristic pathological changes are unknown. Post-mortem observations reported by Gee, Still, Poynton, Armstrong and Nabarro, Taylor,[8] Miller[9] and Moorhead.[10] Some reported enlarged and fatty livers while others observed a small liver. In some there has been found a marked thickening of the intestinal wall while in others the gastrointestinal tract has appeared normal in the gross and microscopic examination. The pancreas in some instances presented evidence of pancreatitis but this has not been sufficiently uniform to warrant its consideration as a causative factor.

Children with celiac disease are particularly liable to upper respiratory infections, otitis media and broncho-pneumonia. Complications directly referable to the metabolic disturbance and dietary restrictions imposed in treatment are anemia, edema, scurvy, pupura and tetany. The anemia is of secondary character but may become pronounced. The edema is related to the nutritional disturbance and is not referable to the heart or kidneys.

Scurvy has been observed in the course of the treatment and one should be mindful of the necessity of the antiscorbutic vitamine in prescribing the diet. The association of tetany with deficient calcium absorption may explain its occurrence in the illness. Still reported the very extraordinary complication of osteomalacia in one of his cases after four years of treatment.

The prognosis in this disease is discouraging. One may anticipate a year or two at least of tedious and exacting care. If then the child has slowly regained his health and manifests growth the result is good. The chronic nature of the ailment is very likely to result in variable care. Few parents possess the mental make up required for such prolonged and consistent attention to detailed and restricted feeding as these children require. They go from one physician to another seeking more speedy relief. In their weakened condition there is always the danger to life of intercurrent infection. If this be escaped they may finally struggle back to health and normal nutrition. More often permanent retardation of physical development results.

The diagnosis of celiac disease is generally without difficulty if one but bears it in mind. The character of the stool, the afebrile course, the fluctuations in weight, the plump face and the emaciating body should suggest the diagnosis. Tuberculosis may be excluded by the temperature curve, the absence of adenitis, fluctuations in weight, the daily variation in abdominal measurement together with the absence of palpable abdominal glands or omental masses.

Usually there is nothing to suggest syphilis but it must be thought of and ruled out.

Ulceration and chronic colitis should be readily excluded by the history of the case and by examination of the stools. Lesions of the colon will not cause the stools with the large amounts of fat, and blood and pus will be found.

The enlarged abdomen may suggest Hirschsprung's disease, a congenital mega-colon. The colon in this disorder is enormous as compared with celiac disease. This with the stools will suffice to differentiate the two conditions.

Pancreatic insufficiency is most readily determined by the therapeutic test. It responds to the administration of pancreatic extracts while celiac disease does not. Pancreatic functional tests may also be of service. In pancreatic insufficiency there is an excess of fat in the stools. It is present chiefly in form of neutral fat. The soaps and fatty acids which are so prominent in celiac disease are absent.

The successful treatment of celiac disease requires tremendous fortitude on the part of the parent and much consideration by the physician. The first requisite is the realization that the course is going to be prolonged and tedious and characterized by relapses.

The irritability of these children must be met with intelligence and sympathy. Climatic conditions which would assure greater freedom from respiratory infections than we enjoy in Iowa and thus permit the child to be out of doors most of the time should be of distinct help. In this climate it is better to insist on several hours in the open air regardless of cold weather.

The medicinal treatment is secondary to diet and is wholly symptomatic. Various forms of iron may be used on account of the anemia. Hy-

drochloric acid has been used to advantage by some but not with the consistent benefit that one might anticipate in view of the lowered acidity as revealed by gastric analysis. Various laxatives and astringents may be used with temporary benefit under appropriate conditions. The use of pancreatic extracts and bile preparations are of no avail.

The diet is the most important consideration in treatment. In this, as in diabetes, one should consider the basic food requirements for maintenance, growth and energy. The problem is to develop a diet which will meet the normal requirements in the greatest possible measure and still be within the limits of reasonable tolerance by the patient. With an exceedingly limited capacity for carbohydrates and almost no tolerance for fat, this is not an easy task. The diet which comes within the limits of tolerance of the patient must be the foundation. It will be composed largely of protein, with a minimum of carbohydrate and fat. One must be mindful of the vitamine and salt content. Advances from this foundation must be exceedingly gradual and cautious. Errors and slipshod additions are certain to aggravate the symptoms.

All writers agree that the first step in dietetic treatment is the omission of all fresh milk. Its use is certain to perpetuate the trouble. Fortunately the essential milk protein may be supplied in form of dried milk, protein milk, skimmed lactic acid milk, or casein curd. Dried milk and skimmed lactic acid milk are presumably acceptable because of their low fat, low sugar, and decreased buffer values. Protein milk is acceptable because of its low sugar content and decreased buffer value but may not be suitable for some on account of a higher fat content. The casein curd as prepared from cottage cheese or as purchased in form of larosan or casec are excellent because they contain the minimum of both fat and sugar. The commercial preparations are expensive and offer no advantage beyond convenience and uniformity.

No one has had a great series of cases. Frederick Still, of London indicates that he has examined forty-one of them. Other reports referred to cover from one to several cases—a few as many as ten perhaps. Most, if not all, have observed improvement at times. Each one is prone to advise the type of milk successful in his experience as the most suitable basis for the diet. In arranging a diet for a patient with celiac disease I would commend:

1. A survey of the distinctly protein foods available. (It will be helpful if one can combine with this a survey of the experience of others with due regard for their recommendations and for the functional difference which must prevail in different cases.)

2. Estimate a plausible amount of food for starting one's observations. This must of necessity be purely empirical.

3. With the information thus gained determine a diet which does fall within the limits of tolerance for the individual.

It is better to make the maximum restriction in the first place. In the last case observed (a boy eighteen months, weighing fourteen pounds) I failed at first by not doing so. Powdered protein milk—and skimmed lactic acid milk were used because of higher food values and greater ease of administration. Neither were satisfactory. The following diet was then adopted with very satisfactory and immediate response.

Jello, cottage cheese, and egg albumen. After a few days one-half ounce of orange juice and 1 drachm cod liver oil daily were added for their vitamine content. The child gained three pounds in three weeks. The diet was then increased to the following amounts—at which time the patient was taken home.

Jello, 500 grams.
Curd, 300 grams.
Banana, 50 grams.
Egg albumen, 50 grams.
Beef broth (fat free), 6 to 8 ounces daily.
Concentrated beef juice, 2 to 4 ounces daily.
Cod liver oil, 1½ drachms daily.
Orange juice, 2 ounces daily.

His mother was taught the preparation of the diet at the hospital and weighs it as accurately as the intelligent and well trained diabetic does his food. The child has remained on this diet plus vegetable juices for five months without a relapse. He has made a total gain of ten pounds and resumed walking.

Further additions to the diet in due time should include some form of carbohydrate. Cane sugar and lactose are to be avoided particularly. For some unexplained reason the carbohydrate of banana has been found very acceptable to some. It was accidentaly discovered but was so useful in some instances that the so-called banana diet for celiacs has been advocated.[12] It is such a useful form of carbohydrate that it should always have consideration. Of the cereals the most acceptable are those used in infant feeding, the dextrinized starches, such as barley flour, Imperial Granum, Arrow-root crackers, etc. The reaction to the ordinary starch foods varies extremely in different cases and must be determined with the same care that should characterize earlier additions to the diet. Vegetables must be added cautiously lest the fibrous residue irritate the

bowel. The powdered dried vegetables may be a very serviceable substitute.

Sauer[13] of Chicago has recently reported a series of six cases in which he describes his procedure as a "three phase high protein diet", following in principle the treatment as previously outlined by Howland[14] of Baltimore. He found powdered protein milk satisfactory as a foundation and called this "phase one". When the tolerance is increased he adds the almost pure protein foods such as eggs, lean meat, and curds. This he calls "phase two". In phase three he adds the dextrinized starches, later the ordinary starches and finally the vegetables and sugar.

It is my belief that if celiac disease can be placed under appropriate treatment in its early stages the course of the process may be greatly shortened.

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Discussion

Dr. Philip C. Jeans, Iowa City—I can hope to add but little to the suggestions contained in the paper. Dr. Moore has spoken of the infrequency of celiac disease. It is true that the condition is infrequent, at the same time it is not a rare disease. In the Children's Hospital at Iowa City we have one patient under observation, and within a week I have seen another case. However, as the essayist says, it is comparatively a rare disease. There are two problems that present themselves in the management of celiac disease: One is the matter of recognition, and the other, treatment. Dr. Moore has delt admirably with both these factors. Under the head of recognition, we may consider the case of the child who has a well established celiac disease. One of the findings is a great loss of food from the bowels. The stools are large and foul and contain considerable food. As has been stated, these stools are characterized by a large amount of fat, chiefly split fat, which is present. This fact will serve to differentiate this disease from any other similar condition. There are other differences, of course, but that is one outstanding feature by which this condition can be differentiated from others. Another feature, mentioned by Dr. Moore but which might be emphasized, is the remarkable fluctuation in weight which these children have. I am acquainted with no other condition in which occur such extreme and rapid fluctuations in weight as in celiac disease. Variations of one or two pounds in the course of a day or two or even sometimes over night, either up or down, frequently take place. Such variation is, of course, due to changes in the water content of the body—it cannot be due to the taking on or the loss of actual body substance. In regard to the management of these cases, Dr. Moore brought out the basic principles which should be applied. Here we have a child who can take care of protein quite well, but is more or less unable to take care of fats or carbohydrates. Therefore protein must form the basis of his diet and the other things added as one can, at the same time looking out for the total caloric content. Dr. Moore brought out the point that the carbohydrate of banana is useful in these cases, and we also have found this to be true. It is surprising to see a child under two eat a dozen and a half bananas a day. Children, even at this early age, are able to take ripe banana in considerable quantity. A child who has been a patient in the hospital at Iowa City has been under observation for a period of about seven months and is back now for a return visit. When she first came to us the fat excreted in the stool was about 80 per cent of the intake, and at the present time she has improved to such extent that she is retaining 75 per cent of the fat that is fed, and during a time when she was put on a general diet for the purpose of the test. Of course, one cannot say that such a patient is cured. These patients may relapse almost any time and without warning, and dietetic precautions must be kept up for a considerable period of time.

Dr. Moore—I will only emphasize that it is essential to keep up a rigid enforcement of the treatment of this condition over a long period of time. As soon as we see a child somewhat improved, the tendency on the part of the parent and too often with us as physicians is to relax in the daily routine of our treatment. To do so is to get away from the underlying principles, and no disease is more apt to present relapses than celiac disease.

ASTHMA AND HAY FEVER

Zella White Stewart, M.D., Iowa City

Our present conception of bronchial asthma as a manifestation of allergy has introduced a new era in the diagnosis and treatment of this disease. We find this individual hypersensitiveness of foreign protein, which is termed allergy, manifested in various other ways. In cases of hay fever the symptoms of lacrimation and coryza are due to pollen and small particles of foreign protein in the air. Urticaria, angio neurotic, edema and many cases of eczema and erythema are due to proteins in foods ingested. Two cases of Meniere's Syndrome associated

with asthma and due to food allergy have been reported by Duke.[1] J. T. Turnbull[2] reports a case of arthritis with well marked indications of food sensitiveness. Miller and Lerwin[3] report a case of intermittent hydrarthrosis associated with asthma and migraine with evidence of anaphylactic characteristics.

Our knowledge of asthma has been very much advanced by animal experimentation in anaphylaxis. Very little has been added by the study of the pathology. Since asthmatic patients rarely die of asthma few post-mortem findings have been recorded. Koessler and Huber[4] describe the histopathology of the lung structure in two cases of bronchial asthma. One where death was due to suicide during a severe attack, was a well defined case of the exudative type with almost complete occlusion of the majority of the middle size and small bronchi and of the bronchioles by mucous cellular exudate. In the other case death was due to an attempt to desensitize by intravenous injections. This showed moderate passive hyperaemia, small interstitial hemorrhage with mucous and cells in the bronchioles and moderate thickening of the arteries. I. C. Walker[5] states that with the exception of peribronchial thickening nothing is found at necropsy except changes that may be determined by physical examination. The changes are physiologic rather than anatomic; only in well defined chronic cases showing secondary infection are there structural changes.

The theories that have been presented to explain the attacks of paroxysmal dyspnea agree that the stenosis of the bronchi is the cause of the difficulty of respiration due to a spasm of the bronchial smooth muscle system and to swelling and exudations of the bronchial mucua.

To I. C. Walker,[6] the pioneer worker in allergy, belongs the credit of demonstrating protein sensitization in cases of asthma and hay fever. The work carried on by Schloss and Cooke demonstrated that allergy was the cause of most cases of bronchial asthma. More recent reports following the method of diagnosis and treatment advocated by these pioneer workers but with more careful study of individual cases, show that an increasing per cent of cases can be classified as true cases of allergy.

It is only within the last dozen years that any method of testing this individual susceptibility, by skin reaction has been worked out. We have in this sensitiveness of the skin one of the most satisfactory procedures available for ascertaining the cause of disease. Reactions to bacterial products are being utilized in the diagnosis of susceptibility to infectious diseases, namely, the Schick test in diphtheria, the Dick test in scarlet fever, and the tuberculin test in tuberculosis.

METHOD OF TESTING

The technic for the skin test in suspected cases of allergy has been fairly well worked out. First, the cutaneous method of Walker, known as the scratch test, with the application of the protein in solution to the sacrificed surface. This gives at the end of a half hour a local erythema and formation of a wheel with irregular edges. The second method, developed by Robert Cooke, the intradermal or intracutaneous injection of the protein solution with reaction in fifteen minutes.

With these tests only single proteins should be used, since treatment in asthma depends on thorough elimination of the offending protein from the surroundings or food of the patient, and since the desensitizing must be specific, the use of the group proteins is not advisable.

Regarding the relative efficacy of the two methods, where there is a positive reaction from the scratch test there is no question of the patient's susceptibility. But in many cases, after going over the list of possible causes and several repetitions of the group indicated by the patient's history, one fails to get a local reaction, the intradermal is more useful but not without danger.

The interpretation of the local reaction is of the most importance. A pronounced wheel with pseudopods and an area of erythema makes the diagnosis easy but is not found in all cases. Local erythema is evidence of sensitiveness and even delayed reaction coming on as late as twenty-four hours must be taken into consideration; also reaction must be persistently positive with repeated tests.

On the other hand, we find individuals with abnormally sensitive skin giving numerous marked reactions. The interpretation of these are difficult.

There are two questions that are likely to arise as to the value of this test. First, will positive reaction to skin test be found in normal people, in cases giving no history of anaphylaxis? Dr. H. M. Baker[7] of the Children's Hospital of Boston tested some 200 children with various foods. It was evident from his results that the incident of sensitization of apparently normal children is almost a negligible factor. In normal cases where he found a suggestion of a positive or a questionable reaction, it was to articles of food which pediatricians usually avoid in regulating diets of children because of the experience that they cannot be tolerated.

The second question is what per cent of clinical cases do give reactions? Reports from the

large clinics vary in the per cent and are most contradictory and confusing, but in visiting these various clinics one can see that it depends on the thoroughness with which this testing is done. For instance, W. W. Duke of Kansas City tests for groups only. That is, selecting five or six different proteins in a related group and tests from this mixture. His per cent is very low—less than 50 per cent. I. C. Walker, Clinic at Peter Bent Brigham Hospital, uses scratch tests only but limits the number of materials tested to those found to be the usual cause. His per cent ranges from 60 per cent to 80 per cent. Robert Cook, New York Hospital, uses the intradermal method test for individual protein and also house dust and occupational dust, which doubtless contains the specific protein causing trouble. His percentage of positive cases are from 85 to 90 per cent. Others in private practice working with a smaller group of cases with better opportunities of studying the individual's surroundings and retesting their patients report a higher per cent.

In a list of 139 cases which I have had an opportunity to study thoroughly, and which have been under my care for at least two years, I find all give positive reactions, and in only one case has the improvement been unsatisfactory. This patient gives a marked reaction to roses and goldenglow which will not account for her asthmatic attacks the year round. There is something in her surroundings not yet discovered.

There are several explanations of this wide difference in published reports. Many patients give a history of attacks of bronchial asthma, or at least, to symptoms which resemble bronchial asthma, who are not sensitive to proteins but show evidence of association of renal, cardiac, pulmonary and pituitary disease which may cause similar symptoms.

Another reason why diagnosis is not made in many cases is that many patients are in a state of anti-anaphylaxis due to temporary desensitization following an attack. A hypersensitive individual may be in this state for a variable period following an exposure to a large amount of the offending protein which gave rise to the usual symptoms and will not give a skin reaction.

There are cases too that show sensitiveness to unusual proteins and it may be that the number of tests made has not been complete enough New materials are constantly being added to this list.

Inheritance, Age of Onset and Secondary Causes

In trying to sift out the true asthmatic due to allergy from the many cases of dyspnea due to other causes, the history of the case is very important. There is marked tendency towards inheritance—usually there is history of asthma or allied conditions such as hay fever, eczema, urticaria, in the immediate family. Robert Cooke states that from a clinical study of a large group of patients, that sensitization is inherited and transmitted as a dominant cellular characteristic, members of the same and different generations showing evidence of hypersensitiveness to foreign protein in various ways. Age of onset is important. The true hypersensitive cases give a history of early onset. This condition may not have been recognized in the early years as asthma, but there has been a history of constantly taking colds, bronchitis and often a question of tuberculosis and later will develop attacks of asthma. This is true in a large per cent of the cases.

On the other hand, many cases of allergy developing late in life have a fundamental protein sensitization and will give a definite history of inheritance. Often it is very difficult to obtain positive skin reaction in these cases. The skin is unhealthy, the scratch test giving little evidence outside of erythema. The more sensitive intradermal test may demonstrate the cause. Testing and retesting is extremely important in these cases, carried out through several months if necessary.

The following case illustrates the late development of asthma but giving a history of inheritance.

Case 1. Mrs. A., sixty-six years of age. History of asthma in mother's family. A sister has hay fever. She had no symptoms of asthma until the age of forty-six. Has had asthma with only short periods of relief for the past twenty years. She has gone from coast to coast hoping to get relief from change of climate. She reacted to Orris root ****, wheat flour dust *. The late development of asthma was due to the fact that toilet powders were not used by women of Mrs. A's age until well along in middle life. Change of climate had no effect. No matter where she traveled she carried her asthma (powder puff) in her hand satchel.

In the vast majority of cases the diagnosis is easier and the response to treatment more marked in cases where the symptoms of allergy have appeared early in life. In children the results are most striking, removing from their surroundings the offending protein the improvement is immediate. The results are as good but not so immediate in cases of years' standing. The asthmatic attacks cease but there is the secondary condition of chronic bronchitis due to bacterial infection following years of irritation.

Case 2. Mr. R., age sixty-three. Saw him first in May, 1923. He has had asthma since childhood,

over fifty years. His reactions are to feathers, furs and sheep's wool. He was much improved after removing feathers and furs from his home but was not entirely free from attacks until a pet canary was disposed of. The chronic bronchitis showed very slow improvement, the morning cough and raising of sputum persisted for months. It is now two years since tests were first made. The bronchial infection cleared up after a course of treatment with autogenous vaccine. For the past two months he has been free from all bronchitis.

The immediate improvement in children is shown in Case 3.

Case 3. Martha R., eleven years. Had asthma since age of eighteen months. Gave *** reaction to feathers. No attack after complete removal of feathers from home. Her case also illustrated the antianaphylactic stage. Her history so definitely indicated that the trouble was in her home surroundings. After 186 tests, I did not get a definitely positive reaction; only irritation but a persistent one from goose feathers. But when I secured feathers from her own pillows, I found a very marked reaction which I secured with the commercial preparation later. Her family history is of interest. One sister has eczema. Father since boyhood has been subject to bronchitis coming on in May and again in August or September. He gave a marked reaction to corn pollen. These last two years he has kept away from seed corn in May and the developing ears in August and September and has had no attacks of bronchitis.

Another, showing the inherited tendency and the presence of bronchitis in the family due to allergy, is Case 4.

Case 4. Frank F., eleven years of age. Asthma in his father's family. He reacted to several proteins—horse, feathers, dog, tomato and oat. After removing all feathers from the home a younger sister was completely relieved from constantly taking colds and attacks of bronchitis. She was a potential asthmatic.

It is well to point out here that asthma in infants and young children is manifested most frequently by so-called colds and bronchitis. These symptoms take on the appearance of chronicity very easily owing to the fact that if due to foods it would be one eaten frequently or if due to inhalation, there would be constant exposure to it. Infants suffering from chronic and recurrent bronchitis should be carefully studied from the standpoint of their being potential asthmatics.

A large per cent of cases have multiple sensitization ranking as primary or secondary causes. The elimination of the primary cause will give marked relief, but the symptoms of cough and wheezing will persist until all secondary causes are found and eliminated. It is necessary in all cases to give complete tests. The etiological factors in brochial asthma advance rapidly. New proteins are constantly being added to the necessary list for testing.

Practically all cases associate their attacks with and give as the cause of their asthma taking cold, exposure to cold or heat, dampness, changeable weather, winds, indigestion, smoke, etc. After thorough elimination of all the offending proteins and desensitizing when indicated, patients become tolerant of such conditions and find they are not the cause of their trouble.

There seem to be two types of colds and bronchitis, one of which is anaphylactic and freedom from this type follows elimination of the protein. The other type is caused by bacteria.

The following case will illustrate the need of testing and repeated testing until all symptoms have disappeared. Further, a patient should be free from all symptoms for at least a year before one can feel the case is under control.

Case 5. Mr. B., age thirty-eight illustrates the method of following up the cases until all proteins are found. First tested him in April, 1920. Gave a history of asthma since the age of twenty. He would have severe attacks lasting ten days to two weeks when he would not be able to lie down. He was never free from a cough and wheezd on the slightest exertion. He was first tested with 124 different proteins and gave marked reaction to feathers and cattle hair. After the removal of all feathers from his home, he was not coming in contact with cattle hair, he was free from asthmatic attacks for six months, but still had wheezing and coughing. Repeated test, not only adding new proteins to the number already used, but repeated test for two and one-half years has demonstrated the following proteins to which he is sensitive: feathers, sheep wool, cattle hair, meat of fowl, chicken, duck, goose and eggs. He has had in all 346 tests. He has been perfectly free from all signs of asthma and even of colds the last two years.

SURGERY FOR THE CURE OF ASTHMA

Just a word in regard to the secondary infections, enlarged tonsils and infections of nose and upper respiratory tract. It has been assumed that the condition was an important cause of asthma. With this conception in view, it has been the usual procedure to perform extensive repeated operations on the nose and throat in these patients. In some patients with asthma, extensive nasal symptoms are present but there is no evidence that the two groups of symptoms stand in the relation of cause and effect. Dr. Morris M. Kahn[8] of New York reports a group of ninety-four, case 33 of whom had had throat and nose operations. His conclusions were that the asthma

had not been influenced even in cases of relief of nasal obstruction and goes on to say, "In my experience the nose and throat should be left alone in asthma except where the rhinologic conditions demand attention". Luitz[9] deplores operations of any kind for the cure or relief of asthma. He reports a group of fifty-six patients who have had one or more operations on the nose and throat. In only one instance was there relief, in the rest none at all. He is convinced that if the allergy is determined and eliminated from the patient's surroundings or the patient desensitized the indications for operative intervention will disappear.

Case 6. S. S., a boy, age nine years. He gave a history of eczema during his first year. He was tested at Johns Hopkins Clinic and found sensitive to egg and was treated for the same. He later developed a chronic vasomotor rhinitis, daily attacks of sneezing with serous nasal discharge and frequent attacks of asthma, regardless of the fact that he gave a history of inheritance and a food allergy since babyhood. He had his tonsils and adenoids removed, his sinuses punctured and irrigated, but with no improvement. Test showed him sensitive to Orris root ****, feather **, and giant ragweed. Removal of Orris root and feathers gave immediate relief. After treatment with ragweed he went through the season without any trouble.

All these facts give strong evidence that most of the nose and throat pathology is secondary to the chronic irritation and disappears when the cause is removed. In all cases the first step to be taken is to find the offending proteins. I quote Walker again. He says "No surgery should be done on asthmatic patients until the protein sensitization has been thoroughly studied and is controlled. Then surgery is indicated for removal of pathological conditions injurious to the general health." Surgery done with the idea of curing asthma is unsuccessful and no patient is relieved or cured from asthma who has not gone through one year free from all symptoms.

Case 7. Mrs. W. Severe hay fever and rhinitis throughout the year. Four years ago had two operations on her nose. Last winter consulted a specialist who advised her to have no more operations but to change climate. Sensitive to Orris root ****** contained in the face powder she was using. Has had no trouble since giving up the use of the same

Change of Climate

Change of climate would not have been effective in this case, and is not a scientific way of handling these cases. Further, many reported cures from change of climate could easily be explained if the cases could be studied and tested carefully.

Case 8. Mrs. T. Asthma due to feathers. A brother has asthma and is free as long as he stays in California. On his return to his home on a farm in the eastern part of the state I had an opportunity to test him. Found him sensitive to horse hair and cattle hair. In California he is a barber. He could have the same improvement if he would give up farming and move three miles to the nearest city and carry on his work as a barber. Change of location, not climate, is an absolute relief in cases of seasonal hay fever as long as it is far enough away to mean a change in the flora of the regions.

Seasonal Hay Fever and Asthma

In testing for seasonal hay fever the cases giving positive reactions are practically 100 per cent. Usually they give multiple reactions. It is then a question of eliminating the ones that a patient can avoid coming in contact with, and desensitizing against those that are thrown off in abundance and widely distributed by the winds.

To get the best results, this desensitization must be pre-seasonal and carried on during the season. This year I am treating my cases the year around giving a small dose of a potent solution twice monthly.

One season's treatment will not protect for the next season. If we assume, from our meager knowledge of the immunology of this disease, that relief of symptoms following preventive inoculations is due to an increased tolerance (as in morphianism) rather than a true immunization, and that the condition resulting is one of so-called anti-anaphylaxis, this desensitization should be repeated each year or kept up throughout the year for three or four successive years, and such has been found to be the case in practice.

Treatment

The greatest difficulty met with in cases of multiple sensitization, is to evaluate properly the various etiological factors in each person. It is then a question of eliminating offending food proteins, contact with others and desensitizing with others that cannot be avoided. The home conditions must be thoroughly investigated to find points of contact. To obtain results one must have complete cooperation on the part of the patient. It takes such minute quantities of protein to cause trouble that the education of the patient is extremely important.

The following case illustrates this. Mrs. S. has had asthma since childhood. She gave positive reaction to goose, chicken, and duck feathers and sunflowers. She has had no attack of asthma since removing feather pillows and beds from

her home. She had an attack of wheezing after dressing a chicken. (She cannot have a chicken in the house unless it has been thoroughly singed before being brought in.) Another time she had a slight attack of wheezing after using a broom instead of a vacuum cleaner. There is still enough of the dust of feathers in the home to affect her if it is stirred up with a broom. She cannot go into another home and sit on a couch where there are feather pillows without feeling heaviness and oppression in breathing. In most cases due to feathers eliminating them from their home surroundings is sufficient for a relief from all attacks. But even after treatment has been given, they still must watch to avoid all possible contacts.

CONCLUSION

With all the work that is being done and the reports of cases published in the medical literature there can be no doubt of the scientific basis of individual hypersensitiveness in these cases of allergy.

The offending protein can be found if the case is studied thoroughly and repeatedly; with the absolute elimination of the protein or proteins causing the trouble, there is an immediate and striking result. The individual can be desensitized so that he will be unaffected by casual and unavoidable contact. Change of climate is not getting at the cause of the disease. Asthma can be controlled in any climate. Change of occupation is at times necessary. No surgery should be undertaken until protein sensitization has been thoroughly worked out. The full cooperation of the patient is of the utmost importance. In both finding out the cause and in the treatment, much time and persistence is required. Even a brief experience will serve to convince one that the diagnosis and treatment of many of these cases is not simply making a series of skin tests and applying the information gained from them. It is true that frequently one encounters a case where the results appear almost magical and where one feels repaid for much less fruitful labor in other cases.

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OVARIAN PREGNANCY—REPORT OF A CASE*

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The subject of ovarian pregnancy has been discussed repeatedly in the past two centuries, and the literature reviewed many times, hence it is with apologies to my forebearers that I have the temerity to report a case which I feel justified in classing as one of primary ovarian pregnancy.

I shall briefly give the digest of the available literature and then report the case.

The term "ovarian pregnancy" is used to designate that type of gestation which takes place in the structure of the ovary, and for physiological and anatomical reasons has come to be classified by the writers into the primary type, and the secondary or so-called abdominal type. The former is to be considered as meaning the fertilization of the ovum before its liberation from the Graffian follicle, with subsequent development of the embryo entirely within the substance of the ovary. The secondary type is considered as the fertilization of the ovum after its liberation from the Graffian follicle with development upon the surface of the ovary, broad ligament, or elsewhere; and with encroachment upon the nearby ovarian tissue.

The physiological phenomena which make possible the development of primary ovarian gestation are practically unknown, and excepting from an academic standpoint the solution of such physiological problems is a matter of no especial importance.

Primary ovarian pregnancy is a condition which has been recognized for many years, in fact since early in the seventeenth century, when ancient observers demonstrated the condition by microscopical and histological studies. Its possibility is now universally admitted, although there are still a few critics who refuse to abandon their skepticism.

The first proven case reported was that of Catherine Van Tussenbrock in 1899, and three years later Thomson demonstrated a perfectly conclusive specimen. The condition is, however comparatively rare and the available literature somewhat inaccurate because of cases reported which are questionable. In 1908 Norris and Mitchell in reviewing the literature found fifteen positive cases, all of three months or shorter duration; fifteen highly probable cases, and nine fairly probable cases. In the same year Williams

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considered only thirteen cases positive, and seventeen highly probable.

In 1917 Lockyear reported two more cases, and in 1921 Chalfante reported a case and brought the literature up to date.

There are therefore approximately twenty cases considered as positive, i. e., conforming to the criteria as suggested by Spiegelberg in 1878, which has been generally adopted. He stated that an extra uterine pregnancy, in order to be classified as one of primary ovarian origin, must possess the following characteristics:

1. The tube on the effected side must be intact.
2. The fetal sac must occupy the position of the ovary.
3. It must be connected to the uterus by the utero-ovarian ligament.
4. Definite ovarian tissue should be found in the sac wall. This last point has been modified by Williams who states that ovarian tissue should be found in several places in the sac wall at some distance from each other.

The following case fulfills all of the essential points just enumerated, and is exceptionally unusual in that the pregnancy had developed to six and one-half months, and a viable child delivered. As stated previously in this paper only five of the twenty positive cases reported, had reached more than three months development.

Report of Case

Mrs. H., aged thirty-seven, married, housewife.

F. H., negative.

Past medical—Ordinary childhood diseases. Scarlet fever at seven years of age.

Menstrual—Began at age of twelve, always regular, twenty-eight day type, lasting three or four days, never painful. One previous pregnancy which terminated at three months in December, 1921. Last regular menstruation December 23, 1922.

Present illness—First came under observation on February 18, 1923, at which time the patient was seized with a very sudden, severe pain in the lower abdomen soon after retiring for the night. Examination revealed subnormal temperature, rapid pulse, pallor, and profuse perspiration. The pain was so intense that morphine gr. ¼ (H) failed to relieve, and a half grain twenty minutes later gave relief with sleep. The patient was watched the balance of the night and in the morning felt practically normal. A tentative diagnosis of extra uterine pregnancy was made and given to the family in an effort to secure their cooperation in close observation for the future course.

Two days later the patient showed rather marked icterus of the skin and sclera but felt perfectly able to be up and about. Because of the apparently normal general condition of the patient, it was thought that a mistake in diagnosis was made, a feeling which increased as she progressed without trouble for the succeeding four months.

On June 25 the patient began having sharp intermittent cramps in the lower abdomen, closely simulating labor pains and associated with a severe backache; and because of the history of a previous abortion she was put to bed, and small doses of morphine given to relieve the pains. The fetal heart tones were normal. There was no vaginal discharge. The condition remained the same for three days, with an intense backache which could not be relieved and which seemed to be referred to the left scapula and down the right thigh. On June 28 the patient began to vomit, another symptom which resisted all known methods of treatment. The temperature and pulse remained normal, but the intermittent labor-like pains continued. During one vomiting attack the patient was seized with a sudden, very severe pain in the lower abdomen which was so severe that the right thigh was caused to be flexed on the abdomen and the patient stated she had not the power to move the leg from that position.

Because of the symptoms just described the condition of abruptio placentæ was suspected, and the expected uterine hemorrhage awaited for a day, but it failed to appear. Consequently a vaginal examination was made, and it was found that a large mass protruded into the lateral wall of the vagina on the right, while the uterus could be felt well over in the left pelvis. The fetal heart-tones remained normal, and the patient was conscious of very active fetal movements. The findings were sufficient to prove the condition as being an extra-uterine pregnancy and due to the viability of the child, immediate operation was advised.

The patient was removed to the hospital the same day, June 30, and admitted under the service of Dr. J. E. O'Keefe of Waterloo, to whose records I am indebted for the operative and post-operative courses.

Entrance examination showed a fairly well nourished woman on a stretcher, marked pallor of the skin and mucous membranes and with the knees flexed on the abdomen.

Head, neck and chest, negative.

Abdomen shows large mass extending nearly to costal margin on the right, and about 5 cms. above the umbilicus on the left. Fetal heart-tones well heard, rate 140 per minute.

Genitalia—Cervix high up in the pelvis, left side, is patulous and small. Uterus the size of a grapefruit. Fetal parts felt in right lateral wall of vagina.

Laboratory—Blood 50 per cent hemoglobin, reds 3,000,000; WBC 12,000, of which 73 per cent were polymorphs and 27 per cent lymphocytes. Urine negative.

Celiotomy—Under combined nitrous oxide and ether anesthesia a combination right rectus and lower mid-line incision was made. Presenting through the peritoneum a large bluish, black mass was seen—chiefly to the right of the mid-line, and extending well up into the upper abdomen. Under-

neath the mass was a large black blood clot the size of one's hand. Nearby through a small opening in the sac, a fetal foot protruded into the abdominal cavity. The uterus, the size of a large orange, was found well over in the left pelvis. The right tube and round ligament extended anteriorly across the fetal envelope. The broad ligament, though distorted, was easily demonstrable, and the fetus with surrounding membranes and tissues, mobilized. Incision was made into the thin cortical covering, and a living male child of approximately twenty-seven weeks was extracted. Placenta delivered and hemorrhage controlled by ligatures and packing. The child lived ten hours.

Pathology found—Macroscopically the specimen showed a sac-like structure occupying the position of the right ovary, adherent to the cæcum, small intestines, sigmoid, uterus, and pelvic floor. There were numerous old blood clots between the placenta and ovarian cortex. The right tube with its fimbriated extremity was normal except for a great increase in length. The utero-ovarian ligament, although adherent to the mass, could be seen. Microscopical section of the sac wall showed definite ovarian tissue in the cortical membrane which enveloped the fetus.

Post-operative course—The patient left the operating room in moderately severe shock, which was combated in the usual manner. On the third day following operation the red cell count was 2,000,000; Hb. 35 per cent. Blood transfusion was therefore resorted to with a brother as the donor. The patient's condition immediately improved, and the recovery was uneventful aside from a mild thrombosis of the left femoral vein which developed on the fifteenth day following operation, but which responded to the usual line of treatment. The patient was discharged from the hospital in good condition on the twenty-fourth day following admission, and is enjoying good health at the present time.

This case is therefore considered of sufficient importance by the author, to be worth reporting, not only on account of its extreme rarity, but also because of the period of development to which the fetus progressed before operative procedure was indicated. The case fulfills all the requirements of Spiegelberg, in that the tube on the effected side was intact; the fetal sac occupied the position of the ovary; it was connected to the uterus by the utero-ovarian ligament; and definite ovarian tissue was demonstrated in the sac wall. For these reasons I do not hesitate to classify and report this case as being one of true primary ovarian pregnancy.

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PRACTICAL THERAPEUTICS*

C. C. SMITH, M.D., Clarksville

The principal duty of the physician is to heal the sick and relieve suffering. This he may do by a variety of means or a combination of agencies; a rational use of drugs, physiotherapy and hydrotherapy. All knowledge is good and useful if a proper application is made of it. Very much, possibly too much has been said concerning the paramount importance of diagnosis, laboratory work and research. I am taking the ground that while diagnosis and modern medical science should not be by any means belittled, nevertheless a diagnosis that stops short of suggesting measures for securing a return to health, or at least of alleviating suffering, falls short of our duty to the patient.

It may often happen that we are called to treat a patient very early in the course of the disease, when the symptoms and functional disturbances lack diagnostic features, but we treat the patient symptomatically and as likely as not a rapid recovery results; no definite diagnosis having been made. We deserve to be complimented on being more practical than scientific. Let us not forget, it is symptoms that bother the patient; to him symptoms are his disease; and by treating his symptoms we may do him a world of good; but we must be on our guard. We by no means treat symptoms always. We certainly do not commence antipyretics with every elevation of bodily heat; we do not suppress every cough; do not stop every diarrhea; and we do not check every nose-bleed. We abstain when nature is wise, interfere when she is stupid, always combat symptoms that visibly endanger life, and we do not heed those who aid the power of our medication. This is what marks the good doctor, his knowing when to act and when to let go.

Thorough knowledge of pharmacology is valuable, but in the present light of the science it is not everything. Not one of us will deny the great value of potassium iodide as a remedy, and yet there is nothing in the action of that drug, as studied experimentally, that gives us anything like a concept of the benefits to be derived from if in the cure of disease. The modernist is good, but he is not infallible. I believe in modernism

*Read before the Austin Flint-Cedar Valley Medical Society at Nashua, Iowa, October 6, 1925.

so long as modernism produces a positive finding one way or another. But I doubt modernism when it knocks props from under us, without replacing them with some other means of support.

At this point I wish to deplore the occasional remark of physicians of high standing, speaking lightly of the inadequacy of therapeutic measures. Those doubting Thomases, those therapeutic nihilists have done much to estrange the laity and to cause them to get the impression that the medical profession aside from the surgeons and specialists are not sincere about the curative properties of drugs, and our friends and patrons have in many instances given themselves over to the practitioners of many types of mechanical therapy.

But, may I ask, is our reputation such that we deserve to be called therapeutic nihilists? No, it is not. There comes a time in the life of all when the physician must lose in the battle against disease; and unfortunately, it is this one time that counts against us despite the great amount of good we have done in the past. Accept it with courage and optimism.

Permit me now to review the ways and means by which we shall place ourselves on the right track. The first thing, the last thing, and the whole thing, is the determination to do quality work relegating the quantity workers to the background. A medical examination which shall include a thorough analysis of the case from a therapeutic viewpoint is necessary and takes time, and when the public once has the opportunity to observe what stands for strict quality as opposed to speed and quantity practice, they not only will stand for it, but will like and demand it. The public is a fool only part of the time. When there is a serious illness at hand, the patient becomes thoroughly interested in all the details, so that while the physician is examining the patient, the patient is examining the medical examiner. He studies the physician's personality, his method as a system, his facial expression, in truth he studies the whole man, ofttimes more thoroughly than the "snap diagnostician" studies his patient.

Successful therapy demands in addition to the scientific, certain qualities, namely, idealism and optimism. These may be difficult to attain and keep at a proper level. It is easy to preserve our ideals which can never be placed too high; unfortunately, however, if we are temperamentally so constituted that disappointment following a failure to attain the ideal discourages, then an unhealthy state of mind—pessimism—enters, and becomes a difficult problem. Optimism is an absolute necessity, and is not unjustifiable in view of the predominance of our successes over our failures. Even with the worst of the latter, we are usually obliged to admit, despite rigid self criticism, that we have done much to bring the patient relief. So then let idealism, optimism and criticism be well balanced in therapeutics and careful study will take care of the rest. Under no circumstances must we attempt the impossible, otherwise we may readily lose the opportunity of accomplishing that which is possible. In other words, at the onset, let us examine our patient carefully to determine what is curable in his case in particular, and with our knowledge of what is curable in disease in general we are readily guided to accurate prognoses.

Our difficulties in both therapeutics and diagnosis are at times created by the apprehensions and the ignorance of the friends of the patient. Failure to recognize this fact may often lead us into error. I will give an example. Here comes a patient with a persistent and annoying cough which has lasted many months and is growing worse; in a general way the patient does not seem as well as usual. He has had home remedies, has tried the guaranteed "cures" from the drug store, has been manhandled by the lady chiropractor, has had bottle after bottle of cherry expectorant from a competitor, who buys his cough medicine where he can get it cheap. And now the family are frightened about the patient's lungs and come for examination and diagnosis, with the request, that if anything is very bad they shall be told privately. Nothing can be found wrong with the lungs. Aneurism is thought of and ruled out. The circulatory system is fine; there is no disfunction of the kidneys. A look is taken onto the buccal cavity with a fond hope that at least the tonsils will be found very bad. One sees only a "detour" sign; and now for an infected or impacted wisdom tooth. They are not found. Lastly, the external auditory meatus is suspected, and here lurks the malefactor. The canal is completely filled from drum to concha. The cough is a reflex from nerve irritation. The wax is removed and the patient cured. A result that no amount of solid ivory on the cephalic extremity of the chiropractor could have accomplished. The druggist has lost a good customer. The competitor M. D. has a little cough medicine left which always cures, and he who made the diagnosis and cure has a patient by the ear who will follow where the doctor leads.

Let us remember that knowledge of the patient is as necessary as knowledge of his disease. His environment and his temperamental status may be causative factors in the disease constellation.

I wish to voice the opinion that the sooner the public gets away from the idea of specialism for

everything, and encourages the development of the general practitioner who, by the way, should have the courage to announce himself as a real specialist, the better it will be for the health and wealth of the community and the efficiency of the human race.

Allow me to suggest a few axioms for your consideration in the treatment of disease. The first shall be "do no harm". How absurd, physicians never do harm, you say. Of their own volition they do not, but demands of a badly educated public often lead to the adherence to fads and fashions in therapeutics, which in our sane moments we would not countenance.

It is well known that there is such a thing as drug idiosyncrasies. We all know the patient in whose case potassium iodide produces coryza; sodium salicylate, tinitis, deafness and vertigo; atropine, cerebral manifestations, visual disturbances and dryness of the mucous membranes; and quinine, general erythema, urticaria and amblyopia. At this point I wish to opine that quinine should never be given where there is any suggestion, intimation or suspicion of middle ear trouble. It will surely aggravate that trouble.

The dictum *nom nocere* applies to more than drugs. It applies to all our special directions or instructions. Infractions of it usually result from insufficient examinations and undue haste. Do not tell the postman to take a walk for his daily exercise. *Nom nocere* demands investigation into minutiæ.

The second dictum presented for your consideration is "remove the cause". Do you think this is too self-evident? Is it? A short time ago a mother brought her six months old babe to me saying that the child was sick. Questioning brought out that the child was restless, cross and fretful, not pacified by nursing, rendered the night hideous with its cries and that it was nearly always against the eighteenth amendment.

Examination showed only a nervous and poorly nourished child. The mother's manner of living, cooking and eating was far from ideal. Her first great care was that the coffee boiler should always be brewing; and she drank coffee from early morning till late at night. She told me that it made milk for the baby. I indulged in a long talk but all it amounted to was that she should have but one cup of coffee a day and that at breakfast, and that she should drink a quart of milk each day; and the baby would need no medicine. The baby grew and thrived, but as my lectures are not selling well I received no coin.

And now I come to the question of drugs, a question concerning which differences arose that created the greatest medical schism of all times, that alienated your forefathers and mine, and which, until but a few years back, prevented any friendly intercourse between us. An ethical quarrel carried on with great bitterness over a matter which now makes us all smile, as to the proper method of administering drugs. Fortunately this is now but of historical interest.

The fundamental factor relating to the prescription is to be found in an accurate or ideal *materis medica,* which, unfortunately has not been printed. H. C. Wood, Jr., has said, when condemning empiricism, that all prescriptions should be based upon some relationship between the action of the drug and the features of the disease, that he did not care what the relation was, so long as it was a reasonable one. Studying the question thoroughly we are forced to admit that in every instance we must decide upon a prescription based upon the known action of the remedy and the clinical features and pathology of the disease. Whatever that reason may be, we admit also that fundamentally there must exist an antagonism of the remedy to the disease. The antagonism may not be apparent but it is there or the illness can not be cured by the remedy. The selection of a drug then must be made for reasons.

Now let us think what possible reasons there may be for a prescription. Let us also be mindful that the symptoms which we utilize in making a diagnosis are not always the symptoms to which we direct our remedies; for example, sleeplessness may have no bearing on a diagnosis and yet may constitute a part of the vicious cycle which keeps the patient ill. The sleeplessness may be temperamental and not a part of the disease at all, but we may cure the patient by attention to his insomnia only. In any given case it may be expedient to consider a variety of factors. Take for example, the question of rest which we know is the greatest restorer of all. Drugs may be used to secure this, but again, not carelessly but with discrimination, according to the cause of the loss of rest; for example, in cardiac decompensation, with its terrible respiratory distress, with a vicious cycle moving at times so rapidly as to threaten destruction, only morphine will bring the needed rest to the laboring heart through subjective relief of the dyspnea.

A prescription may be made on an etiological basis, as when we give castor oil for clearing the intestines of irritating materials. It may be mechanical, as when we drop atropine in the eye to get the iris out of harm's way in cases of iritis.

Germicidal therapeutics is well exemplified by the use of ammoniated mercury in impetigo.

Then there is specific medication concerning the action of which discussion has been snappy for years. As good examples of this class may be mentioned quinine in malaria, sodium salicylate in certain types of rheumatic fever, and iron in chlorosis. The curative actions in these three instances occur so regularly that one is justified in questioning his diagnosis in the face of therapeutic failure.

Having decided upon what is the proper treatment in a given case, the physician should under no circumstances depart from his original plan without having an excellent reason for doing so. In a measure the therapeutic results must be accepted as aiding or modifying the diagnosis. If the treatment follows the schedule expected, then all goes well. If the treatment fails to modify the disease, as expected, then it is time to change the therapeutic procedure, not however, in haphazard or empirical fashion, but after reexamination of the clinical data to determine if we have been in error at any point. Though the patient does not progress so favorably as we expected or desired, if reexamination and reexamination still go to show that the treatment is best or the most rational, we should not discard it for one less reasonable and therefore offering a smaller prospect of a good result.

A well planned treatment instituted at the onset is often changed because of an unreasonable desire to hurry things along, confusion follows and the patient does not progress favorably.

Doctors are often placed between two lines of critics. If he changes his treatment daily he is said to be wobbly and have no definite ideas; while the other critic will say that he is watchful and versatile. And he may institute treatment to which he aheres most rigidly; then he will be praised by some as having a positive personality and the courage of his convictions, while other observers will say that he has done nothing for the patient since the first day.

An error I have often made and others may have is that of failing to follow exactly the scheme of the originator of a therapeutic idea. Sippy complained that alleged failures in instituting his ideas in the treatment of gastric ulcer show a disposition to make modifications that alter the plan beyond any possible recognition. The same might be said about the Allen treatment for diabetes, and the Willms treatment for bichloride poisoning—(calcium sulphide).

Concerning Drugs in Pneumonia
(Deaths, 140,000 in U. S. annually)

As long as we have no specific, as long as serum therapy offers so little it behooves us to make an intensive study of the three most important therapeutic indications in croupous pneumonia: (1) to prevent and conquer the toxemia; (2) to prevent and avert heart failure; (3) to overcome and successfully treat vasomotor paralysis. This study of pneumonic therapy shall embrace only the treatment of cardiac embarrassment and vasomotor paralysis.

In spite of the oft repeated warnings of eminent therapeutists and clinicians the tendency today is toward routine digitalization of the patient.

In the treatment of pneumonia it is the duty of the physician to correlate cause and effect. We can not afford to sacrifice rational measures for set routine.

It should be remembered that death in croupous pneumonia is due most frequently and primarily to the action of poisons on the vasomotor centers with progressive lowering of the blood-pressure. Indeed lethal termination in this disease never takes place like ordinary heart failure, unless the patient has been a sufferer from cardiac trouble. What really happens in most cases is, what Morrison has aptly described: "The blood accumulates in the dilated splanchnic vessels and the vital organs are insufficiently oxygenated. The blood is gradually drawn from the periphery and continues to be pumped with a steadily increasing pulse rate into the great stagnant pool. Intracardiac pressure falls, the cardiac and respiratory centers as well as the circulatory arteries themselves, are progressively less well supplied with blood until at length complete collapse occurs."

We should also bear in mind that there are two classes of stimulants, which may be used in pneumonia, they are the cardiants and the vasoconstrictors.

The cardiants are drugs which act on the cardiac mechanism either by their effect on the sympathetic nervous system, or by toning the heart muscle, or by their action on the cardioinhibitory centers. These cardiac drugs are digitalis, strophanthus, camphor and alcohol.

The vasoconstrictors are agents which exert a definite influence on the vascular system, increasing the blood-pressure by stimulating the vasoconstrictor nerves, or by toning and nourishing the walls of the blood-vessels. They are represented by strychnine, atropine, caffeine, epinephrine and pituitrin.

Digitalis is chiefly and primarily a stimulant to the heart muscle. It lengthens diastole and increases the force of systolic contractions; but the action of this drug on the vasomotor apparatus is slight, insignificant and merely incidental. I suggest therefore, that in the treatment of pneumonia

when the great sufferers, the vasomotor centers, are obviously failing and falling by the roadside, that you seek the aid of atropine, the great vasomotor constrictant, and strychnine, the great stimulant to the vasomotor centers. These two will do what digitalis cannot.

Given two cases of pneumonia, one will clinically manifest—we will say—a falling blood-pressure, rapid pulse, palor, sweating, cardiac arythmia, abdominal distension, progressive prostration and stupor; these are symptoms of vasomotor failure of deficiency, and atropine and strychnine are indicated. Atropine is a true vasoconstrictor, constricts the vessels of the splanchnic area and dilates every surface capillary. The other case will manifest cyanosis, venous distension, rapid breathing, a weak pulmonic second, a high pulse rate enlargement of cardiac dullness, impaired urinary output, hepatic pulsation and pulmonary edema; these are the symptoms of dilatation of the right heart and should be met with digitalis.

I invite your discussion. I no doubt have mentioned matters concerning which many will have decided convictions contrary to those stated.

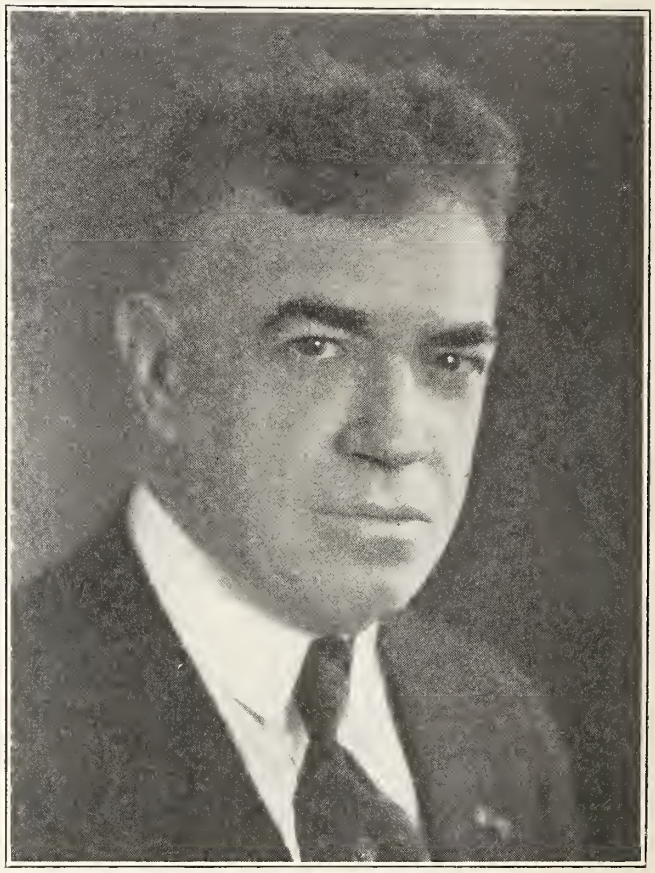
In conclusion let me say, he who speaks his unbelief in therapy confesses his inability.

HISTORY OF MEDICINE IN IOWA

DR. CHAS. M. ROBERTSON

The history of the Robertson family constitutes the most interesting chapter of Iowa medicine. Dr. J. M. Robertson came to the Iowa Territory and located in Burlington in 1838. In 1852 his son, W. S. Robertson, entered his father's office and together they practiced medicine until Dr. W. S. Robertson's death in January, 1887, a period of nearly fifty years. Dr. J. M. Robertson had practiced nearly ten years when he came to Iowa and the two generations had covered a period of sixty years. Thus from the standpoint of the practice of medicine, the only change was the growing experience of additional years. Typhoid fever was typhoid, malaria was malaria, and so on. There was, of course, the increasing skill in application of standard remedies, physical injuries, including fractures and dislocations, were treated in accordance with standard methods of increasing skill, but the time was near at hand when this would all be changed. It would not be merely the increased skill in application, but the involvement of new thought and new ideas which would have their inception with the third generation of the Robertson family.

In 1888, when Dr. Chas. M. Robertson, representative of the third generation, entered upon the field of medicine, scientific methods had been well introduced, sufficiently so to have become a partly established routine of medical practice, but typhoid fever was yet to undergo changes as to a knowledge of origin and development, malarial fever was to change from the



DR. CHARLES M. ROBERTSON

standpoint of transmission and treatment, and many other diseases were to pass from the standard treatments of the two generations to a complete and definite knowledge of scientific cause and sequence under the eye of Dr. Chas. M. Robertson. The methods of treatment of the prevalent diseases of the first two generations were to be continued, but the control and management was to be completely changed, and so in the third generation we have an almost complete revolution in the management of disease. To make the story complete from a medical point of view it is necessary to consider the evolutionary changes which have taken place under the eye of Dr. Chas. M. Robertson during the period of thirty years or more.

It is to be borne in mind that the fifty years we have been considering under the eye of two generations of Robertsons was the standard medical management of disease of the Mississippi

Valley of that period, but there is much more to be said: the building of the state, the building of roads, homes, farms, villages and methods of local government, and many other things. Drs. J. M. and W. S. Robertson were not merely witnesses to the transition of fifty years, but were active participants; none contributed more, none made greater sacrifices; these men were not silent actors in contributing to the welfare of the sick and afflicted, but the active workers in the great upbuilding process.

Dr. Chas. M. Robertson was born at Columbus City, February 1, 1865. In 1869 his parents moved to Muscatine, where he received his school and high school education. In September, 1882, Dr. Robertson entered the State University at Iowa City, in the scientific course, graduating B.S. in 1885. In March, 1888, he graduated in medicine and in June received his M.A. degree; practiced medicine in Muscatine for a year and then became an assistant to Dr. C. M. Hobby, head of department of eye, ear, nose and throat at Iowa City. In 1891-92 studied under the masters in department of eye, ear, nose and throat in Vienna, Paris and London. On returning home Dr. Robertson settled in Davenport, where he practiced his specialty until he was elected professor ear, nose and throat in Chicago Polyclinic in April, 1901. While still practicing in Davenport he was appointed chief occulist and aurist of the Rock Island Railway Company in 1892, serving in that capacity for nine years. While still in the academic department of the State University Dr. Robertson was Adjutant of University Battalion. On August 1, 1890, was appointed major surgeon of the Second Regiment of Iowa National Guard, which was mustered into the service as the 50th U. S. Volunteers, serving as major surgeon; served with the 30th U. S. Volunteers until July, when he received an appointment as chief surgeon of volunteers with a rank of division major. Resigned from army September 1, 1898, on account of typhoid fever. Was elected professor of ear, nose and throat in State University in 1894 and served until he moved to Chicago in 1901.

As already stated, Dr. Robertson was elected professor ear, nose and throat in Chicago Polyclinic, April, 1901, which position he has held continuously until the present time and has served as a trustee for ten years, and treasurer for six years.

In 1906 he was elected associate professor in otology in Northwestern University, which position he held until 1912. Was appointed collaborator on the International Archives of Otolaryngology of France in 1908 and served in that capacity until the World War in 1914. At present is abstractor for the Archives of American Oto-laryngology for French and Spanish.

Dr. Robertson is a member of the A. M. A.; Illinois Medical Society; Chicago Medical Society; Chicago Ophthalmic, Chicago Laryngologic; American Otologic; American Otologic, Rhinologic and Laryngologic; American Academy of Ophthalmol, Rhinolog, Otolog and Laryngol; charter member of the Military Surgeons of the U. S.. During the World War was captain of M.C.U.S.A., doing research for the government on the medical aspect of aviation.

Is a member of the staff of the Henrotin Memorial Hospital, Polyclinic Hospital, Alexian Brothers Hospital, Highland Park Hospital, Waukegan Memorial Hospital, (president of staff).

Was married June, 1915, to Mary Van Houton of Eagle Pass, Texas, by whom there were three daughters born, Anita, Martha and Mary Moore, fifteen months old. Lives at Highland Park, Chicago.

HOSPITAL NOTES

Bids for the erection of the new addition to Mercy Hospital are to be opened on Friday, May 7, and contracts awarded. The addition will be of five stories, all reinforced concrete throughout and estimated cost is in the neighborhood of $150,000.

Dedication ceremonies of the new $60,000 annex to the Lutheran Hospital, Twenty-seventh and Pierce streets, were held Thursday night at a banquet at which fifty guests were present.

New Officer in Charge of Veterans' Hospital With Assistant

During the past month three medical men have arrived in Knoxville to fill positions at the Veterans' Hospital. Dr. H. G. Clark of Perry Point, Md., is the new officer-in-charge, taking the position made vacant several months ago when Dr. Wilhite was transferred to the position of superintendent of the hospital at the Great Lakes Naval Training station at Chicago. Since Dr. Wilhite left Knoxville Dr. H. B. Henry of the hospital medical staff, has been acting officer-in-charge.

Dr. Ortho Lynch of Los Angeles is also a new member of the personnel at the hospital in the capacity of assistant to the superintendent. Heretofore the officer-in-charge has had no assistant, but due to the increase in the amount of work it was deemed best by the government to appoint an assistant.

Dr. H. R. Carson, who was a medical officer at the hospital for several years was recently transferred to Perry Point, Md.

The Journal of the Iowa State Medical Society

DAVID S. FAIRCHILD, Editor ..... Clinton, Iowa

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THE SEVENTY-FIFTH ANNUAL SESSION IOWA STATE MEDICAL SOCIETY

This was a season of celebration, an attempt to bridge over a period of seventy-five years, when Dr. Enos Lowe sat in the president's chair at Burlington with twenty-five associates, to the time when Dr. S. A. Spilman sat in the president's chair at Des Moines with one thousand associates. Dr. John Sanford sought out by steamboat and stagecoach the men who should come together to organize Iowa medicine. Dr. Tom B. Throckmorton by radio, telegraph and by mail called out the men who should come together to celebrate in solemn festival the work commenced by the twenty-five pioneers who gathered at the court house in Burlington on June 19, 1850.

We are able to measure by records and tradition the contributions of organized Iowa medicine since that great day in Iowa history, and in solemnity of spirit stand before the world in thought of what will come in the indefinite future, this no man knoweth. For the first fifty years one year was like another. Then came an era of change when, with wonderful rapidity, science opened up new fields to be exploited, and the past was to be forgotten except its traditions, medicine then began its course as a scientific profession based on the discoveries of a small group of workers in the heretofore unknown fields. It was not long when new activities in organization became necessary to meet obligations to the public.

To demonstrate objectively what had happened, the living ex-presidents of the society were caused to stand before the public headed by Dr. Schooler to show how the light of progress had spread with Dr. Fuller and Dr. Spilman as the exponents of modern thought.

The Diamond Jubilee Anniversary was the greatest event in the history of Iowa medicine since the 1850 meeting, and those who were responsible for the program are entitled to great credit. It is to be regretted that a few members who were accustomed to prepare papers were disappointed but it should be remembered that Jubilee occasions do not come very often, and every living member should be thankful that his life had been spared to participate in this our first, another will not come until 1950 and a new group of ex-presidents will stand before the public to be measured.

We need not say much at this time as to the character of the clinics and addresses of the famous men who appeared before the society, only to regret the inability of one or two to be present.

The most important work of the House of Delegates was reorganizing the board of trustees. Heretofore the activities of the board of trustees, who were responsible for the property of the State Society, were limited to auditing the bills presented, but not for the manner in which the money of the society was to be used. The danger was that hasty legislation might be enacted without regard to whether or not there was money to meet the money appropriated. Under the new rule, the House of Delegates may determine any policy but they cannot appropriate money, and the policy may fail because the trustees may not be able to furnish the money, or refuse to do so. This will be seen to be a wise policy and will lead to a budget plan in which a small body of men in control of the funds will determine a fair distribution of the money in accordance with the income and the necessities of the various activities. There can be no doubt as to the wisdom of furnishing the essential activities with sufficient money to function properly by the exercise of reasonable economy and this will be determined by the trustees. If new activities are taken on the additional expenses should be met by raising taxes and not by crippling essential activities.

The board of trustees are the executive body of the Society and should have control of the executive committees, and should determine their personnel, so there shall be no division of authority. The editor of the Journal should be appointed by the board and his compensation fixed by them. If the House of Delegates elects the

editor and the trustees fix his compensation he would be subject to the House of Delegates and not to the board and if the board should refuse his pay a deadlock might occur. The same is true of the Committee on Medical Defense. Under the new order the editor and the Committee on Medical Defense report to the House of Delegates through the board of trustees. These are executive agencies and should report first to the trustees and under their direction may present their report to the House of Delegates for their information. The House of Delegates then on their own initiative or with the advice of the board of trustees may abolish the Journal or the Committee on Medical Defense but while these agencies are continued the House of Delegates relinquishes control over them. The board of trustees may determine how much money these agencies may use, and require them to submit any increase in expenditure for the board's approval, and instead of having their own way, except once a year, these agencies are always under the watchful care of the board and if the board is too exacting and arbitrary they have the privilege of resigning and the House of Delegates have the power of abolishing the board of trustees or even removing them.

Under the present rule the House of Delegates have assumed the great responsibility of carefully selecting the members of the board of trustees, not on the basis of good-fellowship, but on the basis of cold blooded efficiency, justice, fairness and generous consideration for the rights of all concerned. This, the House of Delegates have done in electing Drs. O. J. Fay, V. L. Treynor and J. F. Herrick.

The election of president-elect was a close affair, Dr. M. J. Kenefick and Dr. T. U. McManus, the leading candidates, afforded but little choice. Both were desirable men, of high standards and character, and well fitted for the high office and it was only a question who should come first.

THE IOWA UNIVERSITY CLINIC

The medical clinic held at Iowa City, April 13 and 14, 1926, was a marked success both as to the number of doctors in attendance and the clinic itself. It was said that the attendance exceeded any previous clinic. The real value of a clinic like this is not to be measured altogether by the number who come or by the size of the crowd, but by the coordination of the work and the interest manifested.

We visited all the clinics except the specialties and found the amphitheaters and clinic rooms as well filled as was profitable or comfortable. A large proportion of the attendance was made up of general practitioners from all parts of the state as might be expected, and as it should be. The medical school of the University has been in operation fifty-six years and for many years was of the nature of a private institution so far as the general interest of the profession was concerned and depended on the personality of the faculty for its reputation, but it now belongs to the state, and the profession of the state claim it as their own. In making this claim the alumni assume a great responsibility. Dr. Verne Hunt of the Mayo Clinic, in his after dinner speech made an important statement to the effect that brick, mortar and steel did not make a great school. This was suggestive to the minds of some, in the fact that so many strong men had been lost to the institution, but here is where the responsibility of the alumni rests. Because popular professors receive and accept calls to other universities is no reflection on the school or its responsible officers, for it happens everywhere, and should not excite criticism, which might be unjust and harmful in its effects. It does not mean that because the favorite of one student or group of students goes to Chicago, Montreal, Boston or Baltimore his place may not be as well filled by another, in fact it is recognized that an exchange of professors is an advantage for reasons we need not mention. The main fact is that the alumni should steadfastly support the school and its officers and not criticise unless it become apparent that "brick and mortar" has obsessed the institution at the expense of its internal equipment, which is not apparent in our own university.

We were impressed favorably with the clinic on internal medicine. Particularly interesting cases were presented and utilized in a skillful and instructive manner and could not fail to be helpful not only to the young practitioner but also to those who had reached the age of the writer. The same might be said of the surgical clinic and of all the special clinics so far as we were able to judge. But more than all else was the spirit of home-coming which prevailed among those in attendance. The banquet at the Community Building was a delightful occasion and demonstrated the advantage of such a hall where students could gather on occasion. The provision of a delightful environment is certainly helpful to the moral and social life of university students, and it is to be regretted that provisions of this kind were so long overlooked.

One of the impressive features of the meeting was the address of Professor Howard of McGill

University, Montreal, on Chronic Aortitis and Aneurism of the Aorta. It was the best presentation of the subject we have ever listened to. No one could fail to follow the sequences of infection, inflammation and dilatation. The subject had grown from Dr. Howards' personal observation of sixty cases, classified and arranged as to the portion of the aorta affected.

The writer feels that he spent two profitable and delightful days at Iowa City, particularly among groups of medical men, many of whom have their professional life work before them and who have a desire to fit themselves, and keep themselves fit, for the best possible service. Some of the things we have written were suggested in private conversation that came to our ears in an irresponsible way and which might grow into undeserved and unjust criticism.

PROGRESS OF NATIONAL ENDOWMENT FUND OF THE PHYSICIANS' HOME, INC.

Organization plans for the National Endowment Fund of the Physicians' Home, Inc., the movement to provide homes for the old and financially insecure physicians of the country, are progressing rapidly. Endorsement has already been given by the American Medical Association, through its president, Dr. Wendell C. Phillips, and contributions are being received from all over the country.

From the beginning in organizing this movement, a solid coalition of all state, county and city medical societies in the United States has been advocated, in order that they might work together in national unison for the establishment of at least three homes of tranquility, to provide for these old, worn-out and incapacitated physicians and surgeons.

One home will be established in the northeastern territory, including Pennsylvania, New Jersey, New York and the six New England states. For this northern unit, an option to purchase has been secured on Downsbury Manor, located at Ridgefield, Connecticut, fifty miles from New York City, and very centrally located in the group of states mentioned.

Colonel Edward M. Knox, "Knox the Hatter" spent approximately a million dollars in the construction of Downsbury Manor, and it is offered to the Physicians' Home, Inc, at a gift price of only $125,000. It is an estate of about 300 acres, with fourteen buildings and the Manor House.

The southern territory will include the states from Maryland to Florida. For the home in this section, the purchase of a new steel and brick building, erected in 1922 by the late Dr. G. T. Divers, at Stuart, Virginia, is contemplated. Dr. Divers erected this building to be used as a private sanitarium, and it contains fifty rooms, and the necessary outbuildings, situated on a hundred or more acres of land near the North Carolina line. The cost of this building was about $250,000. Mrs. Divers offers the property at $100,000, but will donate $45,000 to the Physicians' Home, Inc., and the purchase price is thus made only $55,000.

The next step is to secure a site or another gift building and property somewhere in the middle west, to provide for the old and incapacitated physicians in that territory. It is thought, on account of climatic advantages, that a home should be located in southern Illinois or Missouri to provide for the midwestern territory.

These three units should take care of the incapacitated members from the 140,000 physicians in these three territories. In addition to this, there will be 12,000 in California, Oregon, Idaho, Washington, Arizona, Nevada and Utah, for whom a home will be established in the Golden Gate territory, namely, California.

The proposition has been approached from every angle, information has been secured from every source, including the best legal talent, and leading medical men, and it is conceded that the unit method is in all respects the most practical.

Establishing a home in each of many states was seriously considered, but in view of the tremendous cost, upkeep and supervision involved under such an arrangement, this plan was rejected, and the project will be carried out with the three or four unit homes outlined above. These units will amply take care of all the needy and incapacitated doctors, who, it is believed, will find life more interesting among numbers than among a solitary few.

AUTHORIZED SCARLET FEVER PRODUCTS FOR THE DIAGNOSIS, PREVENTION AND TREATMENT OF SCARLET FEVER

The demonstration in 1923 by Drs. George F. and Gladys H. Dick of the Memorial Institute of Chicago of the cause of scarlet fever by means of human inoculation experiments, and the discovery by them of the specific toxin of the disease and corresponding antitoxin, laid the scientific foundation for the development of a specific, potent and standardized scarlet fever antitoxin.

The antitoxin developed by the Dicks was obtained by immunizing horses with sterile scarlet fever toxin, and the antitoxic serum from these horses was concentrated not only to increase its potency but to avoid or reduce the frequency of severe serum reactions.

Since the announcement of the discovery by the Dicks of scarlet fever antitoxin sufficient time has elapsed to have given it a thorough trial, not only for passive immunity, but also for the treatment of scarlet fever.

It has been found that the administration of a properly prepared and standardized, concentrated scarlet fever antitoxin, in cases of severe or moderately severe scarlet fever, blanches the rash, lowers the temperature, improves the general condition and, when given early, greatly diminishes the

incidence of complications and sequelae. Used prophylactically in adequate doses, the antitoxin prevents the development of scarlet fever in susceptible persons, even after infection has occurred.

The most striking results following the administration of the antitoxin are obtained in those cases to whom the antitoxin is administered within the first three days of illness or, in other words, when the rash of scarlet fever is appearing. The intravenous administration of adequate doses of scarlet fever antitoxin to such patients is frequently followed by a fall of the temperature to normal in less than twenty-four hours, and a marked diminution if not a complete disappearance of the rash.

The patents granted to Drs. George F. and Gladys H. Dick have been assigned by them to the scarlet fever committee, incorporated, of Chicago, for administration, and the Scarlet Fever Committee, Inc., has granted the first license to E. R. Squibb & Sons for the manufacture and sale of authorized scarlet fever products. Prepared under the Dick patents, these authorized scarlet fever products consist of scarlet fever antitoxin, both therapeutic and prophylactic; scarlet fever toxin for the Dick test to determine susceptibility to scarlet fever; scarlet fever toxin for active immunization against scarlet fever, and scarlet fever antitoxin to be used in the diagnostic blanching test.

It is to be noted that the Council on Pharmacy and Chemistry of the American Medical Association has accepted all of the authorized scarlet fever products put out by Squibb & Sons, and that the Squibb scarlet fever toxin, both for the Dick test and for active immunization, are the first, and so far, the only scarlet fever toxins accepted by the Council on Pharmacy and Chemistry of the American Medical Association. It would be well to note the strict control under which the Squibb authorized scarlet fever products are prepared. The Squibb products are prepared and thoroughly controlled by (1) the controls and tests made in the Squibb Biological Laboratories; (2) under government regulations samples of each and every lot of scarlet fever toxin and antitoxin are required to be submitted to the hygienic laboratory for test and approval, and (3) samples of each and every lot of scarlet fever toxin and antitoxin prepared under the Dick patents are required to be submitted to the scarlet fever committee, Inc., for laboratory tests and clinical trial before any of that particular lot is placed upon the market.

This triple control (which does not exist for any scarlet fever products not prepared under license from the Scarlet Fever Committee, Inc.,) insures products of absolute and maximum potency and is, in effect, a guarantee on the part of two control institutions, independent of the Squibb organization, as to the potency of the Squibb line of scarlet fever preparations.

Scarlet Fever antitoxin prepared by E. R. Squibb & Sons may be used by physicians with the assurance that the tests made by the Scarlet Fever Committee, Inc., have shown that each and every lot is distributed in a dosage which has been found by them to be therapeutically efficient in cases of developed scarlet fever, and which will give protection when used for passive immunity. Under the reuqirements of the Scarlet Fever Committee, Inc., the Squibb scarlet fever toxin for active immunization is put out in a dosage which has been found to be effective in bringing about active immunization.

The Squibb scheme of treatment of scarlet fever toxin contains more than ten times as much active immunizing material as that of a number of competing brands on the market.

In order that druggists may furnish to physicians the authorized scarlet fever products, prepared by methods developed by Drs. George F. and Gladys H. Dick, they should carry in stock the Squibb line of authorized scarlet fever products.

Waterloo, Iowa, April 23, 1926.

Editor, The Journal of the Iowa State Medical Society:

I wish to report a case which I believe to be rather uncommon.

Male, twin full term, weight five and one-half pounds para, four others living and well. Normal delivery. Family history negative. On the third day following delivery, the nurse reported that the baby had a temperature, and that there was moderate abdominal distention. The following day, the condition showed no improvement, in fact the distention was more marked and frequent vomiting occurred. There was an absence of peristaltic action, and a diagnosis of peritonitis was made. By this time, the condition of the child was so grave that nothing could be hoped for by any method of treatment, but an exploratory was requested in order to clear up the cause of the apparent peritonitis. This was granted; and upon opening the abdomen, the peritoneal cavity was found to contain bloody fluid, with a general diffuse inflammation of the visceral peritoneum. In gently searching for the cause, we discovered bubbles of gas escaping from the greater curvature of the stomach. On close inspection, it revealed a perforation of the stomach about the middle third through the greater curvature.

The child rallied from the immediate effects of the operation but died in ten hours. I have been unable to find any mention of a case similar in character, and where a definite perforation was demonstrated at operation in a baby four days old. Nothing had ever entered the stomach with the exception of a little sterile water, and what fluid it was able to obtain from the breast. Had I been aware of the fact that such a condition was possible at such an early period, and had as a result, instituted operative measures early, the life of the child might have been saved.

J. E. Brinkman, M.D.

I am proud that I belong to a profession that knows no flag, that knows no boundary lines, that knows no politics, but a profession that has the world as its field, the welfare of mankind as its one

and only object. No other profession is as free from shackles. No other profession that puts the aid of suffering humanity as its only goal.

Heroes they that go to war and fight for territory or supremacy, then live to enjoy the blessings of a hero-worship public, honors, decorations, homes, every want furnished. But what about the uncrowned heroes, they that fight day after day and night after night, that expose themselves to unseen foes oftentimes more dangerous than bullets and more destructive than mustard gas? What are their rewards Where are the bands that announce their arrival, where are the decorations, where are the homes that care for them when weakened and no longer able to answer the pathetic call of those in distress? A crown of thorns is the reward, strapped down by laws that hamper them on all sides, like the lowly Nazarene, still they struggle to help a worthy brother in distress.

Quarantine laws, childish in their demands, are forced upon him, the lowly assessor, tiring of his job, shifts part of his work on him; a government imposes special taxes on him; a state places a registration fee on him; even the innermost places of his office are not his and when it comes to legal protection, the day laborer can collect, while he cannot. The judge and lawyer get their fee, but the doctor may get nothing.

This ought not to be. We, of this noble profession, should demand better treatment, we should be protected, we should be aided, as well as giving aid. Some recognition of our service to humanity should be given us. Years spent in noble service is deserving of a better reward. True it may come on the Other Side, but certainly it is not coming on this.

R. A. Hills, M.D., Russell, Ia.

Shenandoah, Iowa, May 7, 1926.

The Journal of the Iowa State Medical Society:

Am inclosing card of F. L. Belt who was in Shenandoah about eight weeks making collections for doctors and dentists. I gave him a number of accounts, some of which he collected. Last Saturday he and wife and little girl left town. He told the hotel proprietor that he was going to Des Moines. He left with all the collections he made for me and I understand others.

Respectfully,

J. D. Kerlin, M.D.

SOCIETY PROCEEDINGS

Carroll County Medical Society

The regular meeting of the Carroll County Medical Society was held Friday, April 9 at St. Anthony Hospital, Carroll, Iowa.

All the doctors and their ladies of surrounding counties were invited to a dinner preceding the meeting, as guests of the local society.

The speakers of the evening were Drs. P. C. Ieans and Fred Smith of the State University of Iowa, who covered the subject of Focal Infection in an interesting and profitable manner.

About seventy were present, the ladies being entertained at cards during the meeting.

W. L. McConkie, M.D., Sec'y.

Dallas-Guthrie County Medical Society

Members of the Dallas-Guthrie Medical Society met in quarterly session at the Morlan Hotel. A splendid program was given as follows:

Clinical Reports—Dr. W. V. Thornburg, Yale.

Functioning of the Upper Extremity—Dr. F. A. Ely, Des Moines.

Measures to Prevent and Control Preventable Diseases—Dr. Jas. W. Wallace from State Department of Health.

Officers of the society are Dr. H. E. Kleinberg, Redfield, president; Dr. Roy R. Jones, Linden, vice-president; Dr. S. J. Brown, Panora, secretary-treasurer.

The next meeting will be held on July 15 at Adel.

Des Moines County Medical Society

On Tuesday, April 13, Dr. Edward H. Skinner of Kansas City was a guest of the Des Moines County Medical Society and on that date the speaker addressed three public meetings in Burlington assembled by the medical society for the dissemination of information on public health and cancer.

In the forenoon Doctor Skinner spoke for half an hour before the high school assembly on the general subject of The Heroes in Medicine, with special reference to Pasteur. At noon he spoke before a luncheon of the Service Clubs of Burlington, meeting with the Lions Club. His subject was The Conquest of Cancer.

In the afternoon he repeated a large part of this talk on The Conquest of Cancer, before a group of ladies in the assembly room of the Burlington Hospital Nurses Home, emphasizing the peculiar danger of cancer as it affects the female. In the evening Doctor Skinner made a very interesting presentation on the subject of Diagnosis in Gall-Bladder Diseases by the Roentgen Method, before a large group of doctors from this portion of Iowa and Illinois. He illustrated his talk with many excellent x-ray films.

The next meeting of the medical society will be held Tuesday, May 18. The program for that meeting includes Doctor McVicar and Doctor Donald C. Balfour of the Mayo Clinic, Rochester, Minnesota. Doctor McVicar will speak on Diseases of the Liver and Bile Passages: Clinical Application of Recent Investigation, and Doctor Balfour will speak on Benign Lesions of the Stomach and Duodenum.

H. R. Peoples, M.D., Sec'y.

Lee County Medical Society

The forty-second semi-annual meeting of the Lee County Medical Society was held in Keokuk Thursday afternoon, May 6 at the Elks' building at 1:30 o'clock. The usual dinner was served at 6:00 o'clock. Dr. R. L. Feightner of Fort Madison, president of the society, Dr. F. B. Dorsey, Sr., of

Keokuk, vice-president, and Dr. William Rankin of Keokuk, secretary-treasurer.

The arrangements for the meeting were in charge of Drs. F. M. Fuller, C. R. Armentrout and E. G. Wollenweber. The program of the afternoon session was as follows:

Management of Eclamptogenic Toxemias of Pregnancy, by Dr. F. H. Falls of Iowa City.

Some Interesting Kidney Cases, by Dr. M. G. Alcock of Iowa City.

Tuberculosis of the Kidney, by Dr. Leon Rosenwall of Kansas City, Missouri.

Marion County Medical Society

A meeting of the Marion County Medical Society was held Thursday, April 29, 1926, 1:30 p. m., in court house at Knoxville.

Program was as follows:

Paper—Appendicitis and the Country Doctor—D. S. Burbank, M.D., Pleasantville.

Case Report—H. L. Bridgman, M.D., Knoxville.

Case Report—C. S. Cornell, M.D., Knoxville.

Several items of business were brought up and discussed at this time.

C. S. Cornell, M.D., Sec'y.

Polk County Medical Society

The Polk County Medical Society met for its regular monthly meeting in the oak room of the Fort Des Moines Hotel, on April 27, 1926. The meeting was called to order at 7:45 by the president, Dr. Thomas A. Burcham.

The minutes of the previous meeting were read and approved.

Clinical cases were called for but none were presented.

Program

Liver Function and Functional Tests—R. R. Simmons, M.D.

Physiologic Consideration of the Gall-Bladder—H. E. Ransom, M.D.

These papers were discussed by Dr. W. L. Bierring, Dr. D. J. Glomset and Dr. D. S. Fairchild.

The application of Dr. A. W. K. Akerley, by transfer from Milwaukee, Wisconsin, was presented. Dr. F. L. Williams moved that the by-laws be suspended and Dr. Akerley be unanimously elected as a member of this society. Duly seconded and unanimously carried.

The application of Dr. George H. Finch was presented to the society, having been favorably passed upon by the board of censors. Dr. M. L. Turner moved that the by-laws be suspended and the secretary instructed to cast an unanimous vote for Dr. Finch for membership. Duly seconded and unanimously carried. Vote cast.

The application of Dr. H. N. Anderson was presented and referred to the board of censors.

Fifty-four members were present and four visitors.

L. K. Meredith, M.D., Sec'y.

Ringgold County Medical Society

The Ringgold County Medical Society held a meeting in Mount Ayr April 15, in the auditorium of the public library.

There was a good attendance and an interesting program.

Dr. W .R. Hornaday, Des Moines, read a paper on Early Diagnosis and Treatment of Syphilis.

Dr. Donald Macrae, Jr., Council Bluffs, delivered an address on Emergency Lung Surgery.

Dr. B. H. Miller, Blockton, read a paper on Nephritis of Children.

These papers were all generally and carefully discussed by the visitng doctors.

Dr. S. A. Spillman, Ottumwa, president of the Iowa State Medical Society, was present and delivered an address on the County and State Medical Societies.

Dr. William Horne, president of the county society, died last January, and at this meeting Dr. S. W. DeLond, Tingley, vice-president, was elected to fill the vacancy.

The society adjourned to meet again about May 20

Samuel Bailey, M.D., Sec'y.

Tama County Medical Society

The Tama County Medical Society held its regular spring meeting in Traer on Wednesday, April 28.

The noon meal, of which some twenty-five partook, was served at Hotel Oxford.

The meeting proper was held in the auditorium of the public library.

Dr. Don M. Griswold of Des Moines, commissioner of health for the State of Iowa, was the principal speaker and held the closest attention for upwards of an hour in his talk on Immunization against Various Diseases.

Following the discussion of the above very instructive talk, most deserving tributes were paid the late Dr. J. A. Pinkerton, a life long member of the society and resolutions of respect adopted.

Meeting adjourned to meet in Dysart in June.

A. A. Crabbe, M.D.,
Chrm. Pub. Committee.

Wayne County Medical Association

The regular meeting of the Wayne County Medical Association was held at the Allerton Hotel, Allerton, recently. Dr. Foxworthy of Leon was the principal speaker of the evening.

Those present were: Drs. A. E. Davis and U. L. Hurt of Seymour; Dr. Bowman and Dr. Foxworthy of Leon, Dr. Roberts of Pleasanton; Dr. S. W. Corbin of Millerton; Drs. D. E. Williams, B. B. Parker, and J. H. McCall of Allerton; Drs. I. M. Lovett and C. E. Lovett of Lineville; Dr. Ingraham of Sewal; Dr. G. W. Hinkle of Harvard and Drs. G. W. Walker, B. S. Walker, G. H. Sollenbarger and K. R. Luthy of Corydon.

Northwest Iowa Medical Society

The spring meeting of the Northwest Iowa Medical Society was held at Sibley April 14. A banquet was held in the dining room of the Congregational Church at 7 p. m. after which the following program was presented in the court room of the court house:

Direct Surgery for Peptic Ulcer by Dr. F. S. Hough of Sibley.

A Study of the High Mortality of Early Infancy by Dr. Melgaard of Sioux City.

Great Epidemics—Their Military, Economic and Sociological Results by Dr. F. M. Munson of Sioux Falls, South Dakota.

Tubercular Peritonitis by Dr. F. P. Winkler of Sioux City.

An address by Frances B. van Zandt of the State Medical Library of Des Moines.

Dr. D. G. Lass, president of the association presided at the meeting.

Drs. Hough, Winkler and Heetland of Sibley composed the committee on arrangements.

The officers of the society are: President, Dr. Lass of Ocheyedan; vice-president, Dr. Brock of Sheldon; secretary, Dr. J. W. Myers of Sheldon; treasurer, H. J. Brackney, Jr. of Sheldon.

Upper Des Moines Medical Society

The Upper Des Moines Medical Society held their spring meeting at Emmetsburg April 29. The program for this meeting was as follows:

1. Some Economic Aspects of the Practice of Medicine, Dr. J. B. Knipe, Armstrong.

Fractures of the Upper One-third of the Femur, Dr. E. L. Knowles, Fort Dodge.

Ruptured Gastric Ulcers, Their Diagnosis and Treatment, Dr. H. L. Brereton, Emmetsburg.

The Differential Diagnosis of Appendicitis and Pyelitis, Dr. H. W. Scott, Fort Dodge.

All physicians in Dickinson, Clay, Emmet and Palo Alto counties are members of this organization and at least two meetings are held this year which are devoted to the discussion of professional subjects. The officers of the association are Dr. H. L. Brereton, president; Dr. M. T. Morton, of Estherville, secretary, and Dr. J. W. Hennessey, of Emmetsburg, chairman of the entertainment committee.

PERSONAL MENTION

Dr. J. M. Dunlavy of Shelby was fatally injured at the Blair bridge recently and passed away at Omaha hospital. Dr. and Mrs. Dunlavy had driven over from Shelby to spend Sunday with Mr. and Mrs. Hayward Sahn and in the afternoon they motored out to the Blair bridge. Desiring to get a better view of the river, they all started to climb the steep embankment up to the bridge. The Doctor was carrying his little daughter and in some manner he slipped. In trying to protect the little girl, he lost control of himself and fell down the bank. His head struck a rock and he was rendered unconscious. He was brought to town and taken to an Omaha hospital at once but the skull fracture was too severe for medical help and he passed away in the morning.

Dr. P. A. Lillie, from southern Indiana, has located permanently at Epworth. He is a graduate of the medical department of the University of Chicago and has recently done post-graduate work in Chicago hospitals. Dr. Lillie comes to Epworth highly recommended as a physician and surgeon. He will have his office at his residence here.

OBITUARY

Dr. Herman M. Cohen of New Albin died at the New Albin Hospital, March 27, 1926, of chronic nephritis at the age of thirty-seven years.

Dr. Cohen was born in 1888 in Gottingen, Hanover, Germany, and came to the United States with his parents when he was three years old, the family locating at Tacoma, Washington. His father was the late Dr. I. N. Cohen. The family moved to La Crosse when the deceased was six years old. He attended the La Crosse schools, and entered the Rush Medical School at Chicago, and then the Barnes Medical College (now Washington University) at St. Louis.

Dr. Herman Cohen was graduated from Barnes when he was twenty-one years of age, and practiced medicine at La Farge, Wilton and La Crosse, in addition to New Albin. He then took a course in surgery at Chicago, and upon the finishing of his course, took charge of the New Albin Hospital.

Dr. Cohen is survived by his wife, nee Matilda Haynes, whom he married in New Albin two years ago; his mother, three brothers, Dr. Gustave Cohen of Superior, Dr. Marshall Cohen of Milwaukee, and John Cohen of La Crosse, at present a medical student at the University of Minnesota, and two sisters, Mrs. Flora Williams of Tampa, Florida, and Mrs. Mabel Panzlau of Minneapolis, Minnesota.

Dr. Carl Bosley of Ladora died at Silver City, New Mexico, May 2, 1926, of tuberculosis at the age of forty-two years.

Carl Bosley was born in Dexter, February 19, 1884. He attended school in Ladora and then entered the Marengo high school, being graduated with the class of 1902. A few years later he entered the medical college of the state university and was graduated with the class of 1913.

At the outbreak of the World War Dr. Bosley enlisted in the medical corps and was sent to Fort Des Moines, where he was promoted to the rank of major. He went overseas and with the medical units on the battlefields of France, Major Bosley saw much of the horrors of war. After being discharged at the close of the war, he again went to Sioux City and resumed his medical practice.

Failing health made it necessary for Dr. Bosley to seek more favorable climate, and in the autumn of

1920 he located in Silver City, New Mexico Two years ago tuberculosis developed, which compelled him to abandon his profession. His condition steadily grew more serious, and death was the result of hemorrhages.

Dr. Bosleys' first wife was formerly Miss Margaret Adams, of Mount Vernon, who died several years ago. Dr. Bosley and Miss Bertha Johnson, of Aberdeen, South Dakota, were united in marriage, and Mrs. Bosley survives her husband.

Dr. W. F. Stults of Wiota died suddenly of heart disease April 16, 1926.

Dr. Stults was born in Dallas county, January 10, 1857. He was educated in the schools of Guthrie county and graduated in medicine from the College of Physicians and Surgeons, Keokuk, in 1878 and commenced practice at Guthrie Center. After a short period he located at Wiota in 1885. In 1880 he married Miss Maggie McConnell of Greenfield. Dr. Stults was a member of the Cass County Medical Society of which he had been for many years secretary.

Dr. R. J. Hemphill of Plymouth died suddenly of heart disease April 30, 1926, at the age of sixty-five years. He had practiced medicine in Plymouth thirty-four years.

Dr. Hemphill was born in Elwood, Illinois, February 26, 1862. He received his education in the Valparaiso University in Indiana and studied medicine at Northwestern University.

In 1892 he located in Plymouth and the same year was married to Miss Helen I. Corbin of Elwood.

He was a member of the Austin Flint-Cedar Valley Medical Society, the Cerro Gordo County and the State Medical Associations. He was president of the board of education at the time of his death, having been a member of the board for thirty years.

Dr. John Clifford Crawford of Waukon, Iowa, born in Allamakee county, Iowa, May 9, 1854, died at Glensid, Philadelphia, Pennsylvania, April 28, 1926, age seventy-one years, ten months, nineteen days.

Received common school education near Volney and in later years attended the Waukon Academy. Taught school in Allamakee county and later in Ohio. Attended Northwestern University in Chicago and graduated in March, 1882. Was then associated with several physicians, among them Dr. Barnes.

On September 2, 1885 married Flora E. Newell, now deceased. Of four children three survive; Dr. N. N. Crawford of Baltimore, Maryland; Mrs. Bett Allinson of Philadelphia and Mrs. Carrol Steele of Ida Grove, Iowa.

Was ever active in civic affairs and politics, a member of Masonic fraternity and Baptist church.

John W. Thornton, M.D.,
Sec'y Allamakee County Med. Soc.

Dr. J. A. Pinkerton of Traer died suddenly in Iowa City, April 14, 1926, while attending the University Clinic of heart disease.

Dr. Pinkerton was a well known physician in Tama county and was much esteemed by a wide circle of friends and patients. He was born in Johnson county in 1860 and came to Tama county with his parents when he was two years old. He was educated in the Traer high school and graduated in medicine from the Medical School of the Iowa State University in 1886. The following year he entered upon the practice of medicine in Traer where he continued in practice forty years.

GELATINE AS A FOOD

By T. R. Tennant

Gelatine is a colloid obtained by water extraction from the hides, connective tissues and bones of animals. In commercial form, it is a hard, dry, transparent, tasteless substance which will keep indefinitely without deterioation, if kept dry.

The method of preparation, together with the conditions of the raw material, determines the quality and purity of the finished product.

Like any other food for human consumption, gelatine should be produced only from clean, edible raw materials, under the most sanitary conditions. The U. S. Department of Agriculture has prescribed limits for certain impurities permissible in edible gelatine as follows in parts per million: ZN—100; CU—30; AS—1.4; SO_2—350; Ash—2%.

While these limitations are important, and have protected the consuming public to a certain extent, they take no cognizance of such important items as bacteria count, which is an indication of the sanitation or the lack of it, and Folin nitrogen, which, considered in conjunction with other properties, gives a clue to the care exercised in the manipulation of the raw material and of the gelatine during the process of its manufacture.

There are no reliable data showing the actual amount of edible gelatine produced or consumed in the United States. We do know, however, that the largest individual item of consumption is ice cream. This channel consumes about 6,000,000 pounds annually. The other large factors in gelatine consumption are about as follows: Candy manufacturing 3,000,000 pounds; bakeries 2,500,000 pounds; jelly powder 4,500,000 pounds; capsules 750,000 pounds.

Gelatine is used in the above named articles of food primarily for its physical properties. It adds at the same time considerable food value. Gelatine being a simple protein, lacking the animo acids, tyrosin, cystin and tryptophan will not replace a true protein in the constructive metabolism of the body. Lusk in "Science of Nutrition", page 157 says that 7.5 per cent of the total heat requirements of the organism in the form of gelatine spares 23 per cent of the body's protein.

Murlin (American Journal of Physiology, 1907, xix, p. 285) has shown that the sparing power of

gelatine is greatly increased by ingesting in a mixed diet. He further found that the lower the protein condition of an animal, the more readily did gelatine reduce the waste of body protein.

Dr. Robert Hutchinson in "Food and the Principles of Dietetics", chapter v, p. 77, says "As a source of heat and energy, it (gelatine) is equal to protein or carbohydrate, 1 gr. yielding about 4.1 calories. It is as a sparer of protein, however, that gelatine is chiefly of importance in food. It is the most powerful protein sparer known, being able to save from destruction half its weight of protein, or twice as much as is spared by an equal quantity of carbohydrate.

In the feeding of infants and invalids, gelatine is particularly to be recommended. Quoting again from Dr. Hutchinson; same chapter and page as above; "The Digestion of Gelatine in the stomach is a very easy process; indeed, in this respect, it is hardly surpassed by any other food."

Being a peptogenic substance, that is, one which increases the flow of gastric juice, it has the property of materially aiding in the digestion of other foods ingested with it.

When milk is taken into the stomach, the casein is precipitated by the hydrochloric acid in the stomach. The resultant curd is difficult to digest, particularly by infants. The writer has found that the addition of 1 per cent of gelatine to milk and subsequent precipitation of casein by the addition of n/10 hydrochloric breaks up the curd. The size of individual clumps was very materially reduced. It was also found that a greater quantity of acid was required to precipitate the casein in a given quantity of milk when gelatine was added. This is undoubtedly due to the fact that gelatine has the faculty of combining with a considerable percentage of acid. It is, therefore, beneficial in cases of hypersecretion of acid in the stomach.

The foregoing is but a meager story of this very interesting colloid, but may tend to suggest some of its possibilities in the diet.

The writer has a theory that gelatine, being a medium for bacteria culture, may be used to advantage as a carrier for specific bacteria which would, in cases of certain digestive disturbance, clear the intestinal tract of harmful bacteria.

In spite of the fact that there has been considerable work done of late years on this little known colloid, there is still a large field left for investigation.

SELECTING AN INVESTMENT HOUSE

C. G. Throckmorton

In the May number, you were shown very clearly that the accumulation of an investment surplus is a simple, rather than a difficult task. It is largely a matter of selecting your objective, and then building toward it continuously. Now-and-then-investing is almost as bad as no investing at all, for a physician is apt to find himself in a few years with a strange array of securities, some good, some bad and some intermediate.

When the now-and-then policy is followed, a doctor will usually allow his funds to accumulate until he either notices, or has called to his attention, some stock or other security which may seem attractive, and not being in a position, oftentimes, to judge its real value, money is spent for something that proves a poor investment, and at times, worthless.

It is a fact to be regretted, that the "Confidence" men have always regarded doctors among the most susceptible. The motley array of engraved papers that have been sold to doctors as "investments" would make a woeful exhibit.

It was emphasized in the preceding article that the way to assure the right investment of your funds is to place your confidence in a reliable investment organization. The question naturally follows—"How am I going to choose the right organization?"

The answer to that question follows:

First, it will be well to consider the position of the investment banker.

Before the advent of the modern industrial age, with its great inventions and improvements, which revolutionized the world, the raising of funds for the purpose of establishing a new business or extending an old one, was purely a local enterprise. The business man took his problem to the local banker, who either financed the project himself, or secured the aid of a few wealthy men in his locality. Big business then was a matter of scores of thousands—now it is millions.

A new age, with its vast business enterprises requiring the investment of stupendous sums, brought new problems in finance. The enterprises, essential to the well being of the people and factors in the march of progress, could no longer be financed by an individual or a few men. It was necessary to have a means of gathering together the widely scattered funds of the people desiring to invest and making these available to the business world. This necessity for a middleman—an intermediary between governments, municipalities and business corporations desiring funds, and the investing public looking for a safe place to invest its surplus—brought about the rise of the investment banker.

The investment banker is an essential in the continuation of civic and industrial progress, for in every aspect of life, you can see the many modern necessities and conveniences which have been made possible through the sale of securities.

The railroads on which we travel, the electric light and gas in our homes, the schools to which we send our children, the parks in which we recreate, the lumber in our houses, the meats on our tables from the great packing houses—these are but a few of the countless essentials made available through securities.

(Continued on advertising page xxxiv)

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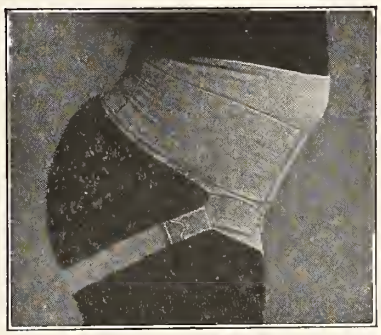

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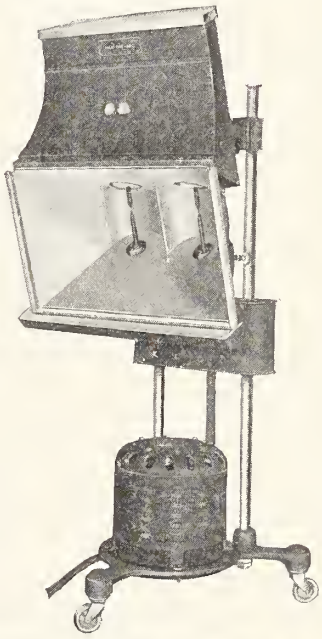

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SELECTING AN INVESTMENT HOUSE

(Continued from page 298)

The responsibilities of the investment house are particularly heavy. Unlike the situation of the average merchant, who can offer his commodities for the personal inspection of his customers, the bond dealer recommends to investors simply evidences of indebtedness which may be the obligations of cities or corporations located at another end of the country or even of the world. The bond business is, therefore, more truly than almost any other, founded on confidence—the investor in buying bonds must rely very largely upon the representations of the bond house offering the bonds.

The bond business is, in consequence, one requiring sound judgment, broad experience, and a trained organization for the purchase and sale of securities. Bonds must be as good at maturity, which in many cases may be ten, twenty, or even fifty years later than the date of issuance, as when first brought out.

Consideration of such factors serves to emphasize further the necessity for a careful selection of your investment house. It may be said advisedly that for the average doctor even more importance is attached to this selection than to the choice of his bonds.

The venturesome investment dealer, who for the sake of large profits, will engage in promotional or visionary financial enterprises, should be carefully avoided. Speculation has its place in the development of our country but speculation in the guise of investment is the proverbial wolf in sheep's clothing.

Your investment dealer should be one whose record and facilities will merit confidence. It should be an established organization, and the financing with which it has been connected in the past should be of high caliber.

The organization should include buyers who are competent and experienced, for unless they investigate an issue carefully before purchasing it, they are apt to overlook flaws which may prove hurtful in the future. With many organizations of reliable character, the investigations preliminary to the purchase of an issue will often consume many months, and the services of lawyers, appraisers, accountants and engineers.

The house should have a sales organization with a distributing capacity wide enough to establish and maintain a broad market for its issues, for one of the greatest assurances of ready marketability is thorough distribution among a large number of holders. While you will probably purchase the greater part of your securities for investment—that is with the idea of holding for a long period—you naturally like to feel that if the occasion demands, you will be able to sell readily.

Finally, the list of offerings of your dealer should be large enough to afford a wide selection, so that you may diversify your holdings among a variety of issues. The value of diversification is readily apparent, it simply being another way of saying that you should not "place all your eggs in one basket."

RABIES VACCINE

(Cumming)

THE importance of preventing rabies is fully appreciated by the medical profession for the reason that not a single cure of a well authenticated case of human rabies has ever been reported.

The prompt employment of Rabies Vaccine is imperative for the safety of the patient. Rabies Vaccine (Cumming), P. D. & Co., is a product that represents the antigenic principle of rabies virus, but since it contains no living virus it can be administered without risk of precipitating an attack of rabies. The doses are not numbered, for they are all alike; 2 cc. of a harmless vaccine by hypodermic injection; no more exacting technique than that.

The safety and efficiency of Rabies Vaccine (Cumming), P. D. & Co., has been amply demonstrated by its employment in at least ten thousand cases of bites from rabid animals. The usual treatment consists of twenty-one injections—one injection daily for three weeks. A shorter course—one of fourteen injections only—suffices when the wound is only a slight scratch on the hands or lower limbs.

Rabies Vaccine (Cumming), P. D. & Co., is supplied in packages of seven 2-cc syringe containers, complete, with needles, each syringe holding one dose. Orders for a 21- or a 14-dose treament should be sent direct to Detroit (the home office) or the nearest branch or depot.

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THE LIVER AND ITS CIRRHOSES*

William J. Mayo, M.D., Rochester, Minnesota

The liver is the central nutritional laboratory of the human body. Food material gathered from the intestinal tract is carried to the liver to be prepared for utilization by the body, and worn-out tissues sent from various parts of the body are salvaged by hepatic action. The liver has the greatest power of regeneration of any organ in the body. If half of the liver of a dog is removed, it will be replaced in three months, and Whipple has found that after the destruction of large parts of the liver, in experimental animals, by chloroform inhalation carried to the toxic point, hepatic tissue will regenerate.

That the function of the liver is primitive is shown by the fact that all its cells are alike in structure and possibly equal in function, and that when it is diseased the anatomic appearance is relatively simple as compared with that of organs of more complex tissues, whose cells have functions that differ one from another. The star-shaped Kupffer cells, however, which line the hepatic sinuses and capillaries, are part of the reticulo-endothelial system, and undoubtedly have specialized functions.

The liver is unique in that it has two sources of blood supply, one of which is venous. The portal circulation is maintained in part by the nonstriated muscle fibers of the intestines and the spleen. In health about 80 per cent of the blood which passes to the liver through the portal circulation is derived from the gastrointestinal tract, and about 20 per cent is derived from the spleen. The tissues of the liver are nourished through the hepatic artery, a terminal vessel which arises from the celiac axis and has no accompanying veins. The blood is returned from the liver through the hepatic veins. The hepatic artery is reported to have been tied in experiments on the carnivora, without causing death; recovery has not followed this procedure on the herbivora.

Of the cellular elements of the blood, the red cells and the blood-platelets are produced in the bone-marrow, and the white cells are formed in the reticulo-endothelial tissues, which include the spleen, the bone-marrow, the liver, the lymph nodes, and certain other tissues. The red blood-cells are purely oxygen-carriers. The hemoglobin of the red cells, in each molecule of which there is one atom of iron, carries from 18.5 to 20 per cent of oxygen by volume when saturated in loose combination. The blood platelets have to do with the process of thrombosis, in aiding vascular repair. The white blood-cells have reparative and defensive functions. Of the leukocytes, the lymphocytes contain all the elements necessary to the life of tissues. Carrel has been able to keep fibroblasts alive and growing for more than twelve years by supplying lymphocytes and removing waste products.

The cellular elements of the blood have been studied morphologically with the microscope, but the highest powered microscope is unable to show particles less than 1/10 micron or 1/250,000 inch in diameter. Particles of lesser diameter lie in the physicochemical field, on which of late years ultramicroscopic methods have thrown light. The constituents of the blood plasma belong to both the colloid and molecular division of matter.

The discovery by Perkin, in 1856, of dyes derived from coal-tar products opened an enormous field for scientific investigation, and the application of this new knowledge to medicine has had great diagnostic as well as therapeutic value. As shown by Evans, the elimination of certain dyes introduced into the body intravenously takes place as a process of filtration, without chemical change or effect on the body tissues. In 1909, Rowntree and Abel found that the dye, phenolsulphonephthalein, was eliminated thus through the kidney. From this experiment they perfected the phenolsulphonephthalein test, which has been valuable in determining the ability of the kidney to excrete urea. In further investigations Rowntree found that the dye, phenoltetrachlorphthalein, was eliminated entirely through the bile, and this discovery, utilized by Rosenthal to test the

*Presented before the Seventy-Fifth Annual Session. Iowa State Medical Society, Des Moines, Iowa, May 12, 13, 14, 1926.

filtering capacity of the liver, has given a means of estimating not only the filtering function but perhaps other functions of the liver. We have found this test of very considerable value in cholemic states in estimating the functional capacity of the liver.

Graham and Cole, working along these lines with other derivatives of phenolphthalein (first the iodin, and finally with the bromin substitution product) and the x-ray discovered a graphic method of showing the physical condition of the gall-bladder by visualization, a diagnostic aid of great importance.

Complete hepatectomy in experimental animals, by Mann and his coworkers, showing that sugar and urea disappear from the blood after removal of the liver, marks an epoch in our understanding of the physiology of the liver. One might say that the liver has five functions:

1. The liver converts carbohydrates into glucose. The excess glucose ($C_6H_{12}O_6$) is finally converted into glycogen ($C_6H_{10}O_5$) for storage in the liver and other tissues as a reserve. This function closely relates the liver to diabetes, fatigue, and shock, and kindred states in which the blood sugar level is an important contributing factor.

2. The liver produces eighteen or more amino-acids derived from protein digestion in the intestinal tract, and converts the effete products of nitrogenous metabolism into a form, as urea, suitable for excretion by the kidneys.

3. The action of the liver in the metabolism of fats is not so well understood as its action on carbohydrates and proteins, but the liver undoubtedly is of some importance in relation to this important foodstuff. It is rather remarkable, in this connection, that in acute conditions, either bacterial or biochemical, the entire liver in forty-eight hours may undergo acute fatty degeneration, so that when cut grossly it will exude droplets of oil. The liver is very closely associated with the formation of the lipoids, such as cholesterol. Usually there is from one-fourth to one-half of 1 per cent of cholesterol in the bile, but in pregnant women there may be a great increase, up to 2 per cent. It has been shown that stones formed in the hepatic ducts contain only a trace of cholesterol, while stones formed in the gall-bladder contain a varying but high percentage. The incidence of gall-stones in women is four or five times higher than in men, and, in nine married women of ten who have gall-stones, the onset of the trouble is related directly to a pregnancy.

4. The excretion of bile pigments and of bile acids into the intestinal tract is an important function of the liver. The latter are of great importance in the digestion of fats. Bile circulating in the blood perhaps binds the ionized calcium, so that in the jaundiced patient calcium exhaustion may appear within a few weeks. It is in this condition that the intravenous use of calcium chlorid, demonstrated by Walters, is effective in restoring the calcium balance so that necessary surgical operation may be safely performed.

5. One of the most important functions of the liver is its relation to infections and toxic conditions of biochemical origin. The liver appears to be a great detoxicating organ. Bacteria and protozoa picked up in the intestinal tract and carried to the liver, are usually destroyed there, although occasionally bacteria pass through the liver by way of the biliary tract. Such bacteria, as shown by Rosenow, may become implanted in the submucosa of the gall-bladder, and are one of the factors to be considered in the formation of gall-stones. Infections carried by the portal system to the liver seldom cause general sepsis, as compared with those blood-borne infections which pass directly to the lungs, and are so frequently a cause of terminal bronchopneumonia.

Comparable to the liver, the spleen, which is a coarse filter, with a very large blood supply, is an organ of several functions, but most of them are relatively unimportant. The spleen strains from the blood toxic substances, microörganisms, and deteriorated red and white blood-cells which are acted on especially by the endothelial leukocytes of the pulp cells, and the residue sent on to the liver. The spleen is peculiar in that the blood from the splenic artery comes into direct contact with the splenic tissues, being separated only by the endothelial layer of cells, since the outer and middle coats are lost. The spleen contains a certain amount of non-striated muscle fiber which acts gradually to empty the splenic contents into the liver through the portal vein. The spleen acts also as a reservoir of red corpuscles, which, under stress, it can release into the blood stream. In the dog, possibly 20 per cent of the blood volume can be stored temporarily in the spleen. Mann, Sheard and Bollman demonstrated that the spleen is one source of the bilirubin.

Counsellor and McIndoe have succeeded in demonstrating spectacularly the vascular and biliary trees of the liver. These studies are very interesting in connection with the varieties of cirrhosis.

Fundamentally, there are two kinds of cirrhosis of the liver, portal and biliary. In portal cirrhosis, irritating material, bacterial, protozoal, toxic, and biochemical, is carried from the gastrointestinal tract or from the spleen through

the portal circulation to the liver for detoxication. The cirrhosis which is associated with the use of alcohol or pepper is a good example of the gastrointestinal type, which comprises the majority of cases. While most of our information is deductive, we have as evidence the frequent occurrence of cirrhosis in parts of India where a large amount of curry is used in the food. In certain diseases of the spleen toxic material is filtered from the blood which causes the Laennec type of cirrhosis of the liver characteristic of the Banti stage of splenic anemia.

The liver first attempts to detoxicate and eliminate the offending material. Failing in this, it tries to encapsulate these diffuse irritating physicochemical products with an enormous amount of scar tissue. This gives the picture of venous obstruction, ascites, hemorrhages from the stomach, with jaundice only as a terminal feature, typical of portal cirrhosis. It is of course possible, when the irritating agent such as alcohol or curry is gastrointestinal, to check its ingestion, but the prospect of cure in these cases is not nearly so good as in the splenic type of portal cirrhosis, in which the removal of the spleen promptly relieves a very large percentage of patients, even when the cirrhosis is advanced.

In only a comparatively small number of cases of portal cirrhosis of the gastrointestinal type does the liver present the typical hob-nailed or contracted appearance and the tawny yellow color which caused Laennec to name the condition cirrhosis. In many cases, the liver is greatly enlarged, and occasionally, instead of being hob-nailed, is smoothed out with fat, especially in the case of persons who drink beer excessively.

The spleen, in the gastrointestinal type of portal cirrhosis, is considerably enlarged, but secondarily, unlike the great primary enlargement of the spleen which takes place in the splenic type of cirrhosis. In the gastrointestinal type of portal cirrhosis, a very considerable mortality follows splenectomy, and the results have not been comparable with the results in Banti's disease. Generally speaking, in the gastrointestinal type of portal cirrhosis, the artificial establishment of collateral circulation, suggested by Talma of Utrecht, independently brought forward by Drummond and put into surgical practice by Rutherford Morison of Newcastle, has much to commend it. We have performed fifty-seven operations of this type, with death in the hospital in eight cases. In some of these death was not connected with the operation, but occurred some weeks or months later from hepatic insufficiency. The results of the operation on the whole were relatively satisfactory.

Hilton Fagg, the eminent curator of Guy's Hospital, London, who wrote one of the most instructive books on medicine, as viewed from the dead-house, that I have ever studied, pointed out that men apparently in perfect health, killed by accident, occasionally showed at necropsy very advanced cirrhosis of the liver; and he demonstrated the various bypaths by which blood could be passed from the portal circulation, around the liver into the general circulation.

Sappey, a French anatomist, was the first to describe accurately these bypaths of compensatory circulation. Counsellor and McIndoe have recently illustrated by perfusion of the liver, the effectiveness of these collateral channels in side-tracking blood from the liver in atrophic cirrhosis. Eck, working with dogs, was able to establish a fistulous connection between the portal vein and the vena cava, but such an operation has not become a practical procedure in man.

By the earlier method of operating to establish collateral circulation, the so-called Talma-Morison operation of omentopexy, the abdomen was opened and the fluid evacuated. The peritoneum of the anterior abdominal wall and over the surface of the liver was then superficially denuded, to allow adhesions of the omentum to secure collateral circulation. The earlier operations were attended by considerable mortality, on account of infection of the peritoneum following the institution of suprapubic drainage. A great variety of methods of draining the ascitic fluid into the tissues has been evolved, including the use of tubes formed of sections of veins extending into the subcutaneous tissues, or formed from fascia.

On the whole, we have found it best to make an abdominal incision in the line of the internal mammary artery at the right costal margin sufficient to make a diagnosis and evacuate the fluid, and then to make a second incision down only to the peritoneum some inches below the first incision, in the line of the deep epigastric vessel. The rectus muscle is then separated widely from its posterior peritoneal attachments and the floor of the second incision thus connected with the first incision. The omentum is then drawn from above downward and spread out in this extraperitoneal pocket. The operation is quickly performed and the amount of collateral circulation established in the course of a few months is quite remarkable. On one occasion I had to remove gall-stones in a case in which I had performed twelve years previously a successful operation for advanced portal cirrhosis; the amount of venous hemorrhage was so great that I had the utmost difficulty in completing the operation. In connection with the treatment of ascites, atten-

tion should be called to the success which has been obtained by Rowntree and Keith, by a new medical regimen involving the use of novasurol and ammonium chlorid. This may be emphasized as an adjunct to operative treatment before or after operation, or in some instances may replace surgical intervention.

Biliary cirrhosis originates in infections of the biliary ducts, which in the usual case have their origin in infections of the gall-bladder, and especially from the infected and obstructed common duct. Just as Cabot showed that in the absence of obstruction and retention the urinary bladder does not often become infected from frequent use of the catheter, so we find that infection of the biliary ducts does not readily occur unless there is obstruction and retention of infected bile. In biliary cirrhosis, jaundice is the first symptom, and the liver is enlarged, soft, dark, and congested, rather than hard and cirrhotic as in portal cirrhosis.

The treatment of biliary cirrhosis of the average type therefore depends on the establishment of thorough drainage of the biliary ducts, as in gall-stone disease, and maintenance of that drainage until the infection and the results of the obstruction disappear.

There is another very interesting type of biliary cirrhosis which can be compared in a way with splenic anemia in the Banti stage, that is, primary enlargement of the spleen, and secondary biliary cirrhosis without infection, with enormous thickening of the bile ducts. Hanot probably was describing this little-understood condition, although it is very difficult from his description, which is largely clinical, to tell just what was meant pathologically. In these cases there is a big spleen, a large firm liver, and chronic jaundice. The removal of the spleen is beneficial. In sixteen cases in the clinic in which the spleen was removed there was but one death, and the majority of the patients were greatly improved. Some patients who had not been able to work for some years were able to earn their living. In no case, however, did the jaundice completely disappear. This condition is undoubtedly often associated with or confused with hemolytic icterus, but unlike the latter disease, there is always bile in the blood and the urine is characteristic of interference with biliary drainage.

Biliary cirrhosis and portal cirrhosis may be associated in varying degrees, and some parts of the liver may be involved to a greater extent than others. In each type there are widespread differences in the morphologic picture, and there has been a tendency to describe each variation by a separate name, some classifications giving even thirty or forty separate varieties of cirrhosis, although, fundamentally, such a classification is like describing each pattern of wall paper or carpet as a different material.

TULAREMIA

J. W. WALLACE, M.A., M.D., C.P.H., Des Moines
Iowa State Department of Health

Interest in tularemia as a new disease, has recently been created in Iowa by the definite diagnosis of two authentic cases. Tularemia got its name from the fact that it was in Tulare county, California, in 1911-1912, that Drs. McCoy and Chapin discovered the causative agent of a plague-like disease prevalent as an epizootic among ground squirrels. They named the organism after the county, viz., bacterium tularense.

Before this date and about the same time a number of cases of a disease that was called deer fly fever had been recognized in Utah. Dr. T. B. Beatty of Salt Lake City had recognized the disease, and in 1910 Dr. R. A. Pearse of Brigham City described six cases in Box Elder county, Utah, that had come under his observation. Later his description was published in a medical magazine.[1] These cases were supposed to be due to the bite of a deer fly (chrysops discalis) that commonly attacks horses in the state of Utah. Dr. Beatty had noted as early as this, or earlier, that there seemed to be some possible connection between this deer fly fever disease among humans and a local epizootic that occurred among rabbits, for it was when many dead rabbits were found lying around that most cases of deer fly fever occurred among humans. It was also noted by Dr. Beatty that the rabbits dying in those epizootics bore on their bodies an ulcer or slough that corresponded very closely to the ulcer occurring on a person who had developed deer fly fever after being bitten by the deer fly.

In 1919 at the request of Dr. Beatty, (state health commissioner of Utah), Dr. Edward Francis was sent out by the U. S. Public Health Service to study this disease which was apparently due to fly bites. To Dr. Francis belongs the credit of discovering the cause of deer fly fever as he was able to isolate the bacterium tularense organism from seven persons and seventeen rabbits in Millard county, Utah, and called the disease tularemia,[2] for the causative agent was found to be identical with the organism isolated from squirrels in Tulare county, California, nearly ten years earlier by Doctors McCoy and Chapin. Later Dr. Francis with a fellow worker proved that the conviction of the Utah

physicians that the bite of the deer fly caused "deer fly fever" was well founded, as these investigators were able to transmit the disease to laboratory animals, by means of the deer fly. Dr. Beatty's early observation that rabbits were in some way connected with the disease was also confirmed, because Dr. Francis was able to show that rabbits were infected with the disease and that other rabbits and human beings might become infected by bites from deer flies that had previously bitten infected rabbits.

Since the above discoveries were made by Dr. Francis, cases of tularemia have been reported from many states, such as California, Colorado, District of Columbia, Idaho, Indiana, North Carolina, New Mexico, Montana, Ohio, Utah, Virginia, West Virginia and Wyoming, and now at the end of 1925 come positive reports from the states of Texas[3], Missouri[4] and Iowa. In all probability the disease exists in other states, but because of its similarity to other diseases and its low mortality it has not been recognized as a distinct entity. From 1922 to 1924 about three hundred cases were reported and there were probably a good many more that never were reported. By making inquiries in two counties in the state of Utah in the fall of 1925 the writer learned of eight cases that had occurred during that year which had not been reported. Three of them were overlooked because the attending physician was unfamiliar with the disease and the others because it is only recently that the disease has been made reportable in that state and in others.

As Dr. Francis has shown,[2] the disease has presented itself under different names and somewhat different manifestations, such as a "plague-like disease of rodents", "deer fly fever", "eye infections due to bacterium tularense", "rabbit fever" and a "glandular type of tick fever". In districts where Rocky Mountain tick fever occurs, some cases have been diagnosed as tick fever, that by agglutination tests were later demonstrated to be due to the bacterium tularense. This mistake in diagnosis might readily occur not only because of the similarity (minus the eruption), of the disease to Rocky Mountain tick fever, but because it was later demonstrated by Doctors Francis, Parker and Spencer that the tick which transmits Rocky Mountain tick fever (dermacentor andersoni) in common with other ticks and lice could transmit the causative agent of tularemia.

The disease then can be transmitted from rabbits to rabbits by ticks and lice, from an infected rabbit to man by the bite of a deer fly (chrysops discalis) and by what now seems to be the most common cause of human infection, the handling of infected rabbits. A case was reported by Dr. M. C. Pfunder of Miles City, Montana, last fall, in which a farmer had been knocking wood ticks off his horses and had handled the ticks. After doing so, he put his finger in his eye in an effort to remove a foreign body that had blown into it. Later he developed what Dr. Pfunder called "a primary tularemia of the eye".[5]

Modes of Infection

The history of the great majority of cases of tularemia occurring in the eastern states shows that the handling of infected rabbits is the most common cause of transmission, while in the western states a much greater proportion of cases results from bites by blood sucking flies or ticks. No cases have as yet been reported as due to handling of tame rabbits or rabbits raised on rabbit farms, but only from handling wild ones.[6] In the West as well as the East, cases occur from handling infected rabbit carcasses, as evidenced by the case history, that the writer obtained, of a woman who died in Duchesne county, Utah, in the fall of 1925, from an infection of the bacterium tularense contracted through handling a rabbit that her son had shot.

On May 1, 1926, Doctors Francis and Moore[7] report that a disease, common in Japan, called Ohara's disease, which affects rabbits and humans has been proven by laboratory tests to be identical with tularemia. Animal inoculations, agglutination tests and microscopic examinations of liver, spleen and lymph glands, all support the identity of the two diseases. This disease in Japan, according to Dr. Ohara "is caused by contact with the uncooked meat of an infected rabbit".

The two cases recently recognized in Iowa occurred in November, 1925, in the same family, a son and mother, from North English, Iowa. The diagnosis was made by Doctors Whiteis and Anthony of Iowa City and confirmed by the Hygienic Laboratories at Washington, D. C. The history of these cases showed that the son had been in the habit of shooting rabbits and dressing them, his mother also handling them and preparing them for the table. Both the son and mother developed an ulcer on the right hand, the son's being on the little finger and the mother's on the index finger, though the case history did not state when the wound had occurred in relation to the disease. The inference was that there was an abrasion or cut at the time of handling the rabbits, as has proven to be the case where complete case histories have been available for cases of this form of infection. It may not be impos-

sible, as Dr. Francis infers, for the organism to enter through the unbroken skin, as may have happened with laboratory workers, but it is difficult to say when skin is unbroken, very slight abrasions often passing unnoticed. The five cases recently (December, 1925), reported from Missouri,[4] which are the first reported cases from that state, were all attributed to the handling of infected rabbits, three of the cases had cleaned rabbits, while the other two had handled them. They also either had wounds on the hands before touching the rabbits, or got them while handling them.

INFECTIVITY

Tularemia is a highly infective disease. Of the eleven cases reported in A. M. A. Journals for 1925-1926, from five different states, nine of them were from handling infected rabbits, one from the bite of an insect, and one apparently from carrying infective matter from an insect to the eye. The three reported from West Virginia[8] were all from handling rabbits. There is no record of a human being contracting the disease from an infected person, except one case in Wyoming[9] where a woman became infected through pricking her finger while dressing the wound of a person who had a tularemic ulcer.

The handling of the organism of tularemia, such as has to be done by laboratory workers, seems to be especially dangerous. In 1922, every one of six laboratory workers in the Hygienic Laboratories at Washington, D. C., who handled the bacterium tularense contracted the disease. In the same year in the Lister Institute in London, England, three laboratory workers contracted the disease and, more recently, three laboratory workers in Montana have had a similar experience. This has happened even though the workers had been especially careful to protect themselves. One attack of the disease apparently gives a fairly high degree of immunity. Only one case of re-infection has been reported, and blood tests show that agglutinins are present for a long time in the blood of persons who have had the disease.

DIAGNOSIS AND SYMPTOMS

In districts where the disease is rare, and because of the lack of uniformity in the signs and symptoms of cases of tularemia, there is frequently a difficulty in diagnosis. The disease has been confused with typhoid fever, anthrax, septicemia, Rocky Mountain tick fever and other diseases. The recent cases discovered in Iowa were first thought to be cases of septicemia.

Since handling of rabbits and bites of insects are so frequently the means of infection, a complete history of the case is most important. A sore on the hand or any exposed part of the body, enlargement of the cervical, axillary or epitrochlear glands, sudden onset of illness, fever and great prostration, together with headache, bodily pains and possibly chills and vomiting, should cause the diagnostician to keep in mind tularemia as a possible or probable cause. The incubation period is probably under one week, with an average of from two to five days. Most cases occur in the summer or fall. The temperature curve often simulates that of typhoid fever, and may vary from 101 to 104 degrees Fahrenheit as a maximum, but a Widal test (except for those who have had typhoid or typhoid vaccine) will differentiate typhoid cases, whereas agglutination tests of the blood serum from the patient who has tularemia, will prove positive with organisms of the bacterium tularense. As in typhoid, agglutination tests may be negative in the first week of the disease, but become more marked and show up in weaker dilutions in the third or fourth week of the disease. Under the microscope the tularemia organism is seen to be a very small bacterium, either coccus or rod-shaped in form. It stains readily with aniline gentian violet. Cultures in the laboratory grow readily on egg yolk or cystin, but Dr. Francis has successfully grown them on other media.[10]

MORTALITY AND PATHOLOGY

Tularemia has had a low mortality; probably not more than one per cent of the cases dying, and consequently there has been little or no opportunity for studying the pathological changes in human bodies. These changes, however, are very clearly marked in rabbits and rodents. A typical liver of an infected rabbit shows small whitish colored necrotic foci. The spleen shows similar small necrotic areas. Microscopic examination of the infected lymph glands shows giant cells, round cell infiltration, dilation of blood-vessels, extravasation of blood and caseation with pus cavities. In epizootics the mortality among rabbits seems to be high. The disease is also highly fatal to guinea pigs and mice. Among humans practically every death reported has had some complication that may have been the big factor in causing death. The death in Duchesne county, Utah, in 1925, was of a woman who was in a very emaciated and run down condition due to an attack of the "flu", when she contracted tularemia. Though recovery is the rule, the disease is nevertheless highly disabling, as most convalescents are unable to return to work before three and often six months; again, among farmers it usually attacks them at harvest time when they can least afford to be laid aside.

Treatment

Treatment is mainly symptomatic, as yet, we have no curative serum or vaccine. Rest, and treatment as for febrile conditions is indicated. In cases where glands have become purulent, and the pus does not make an opening for itself on the skin surface, nature may occasionally be aided by an incision. Dr. T. S. Shelton of Richmond, Virginia, reports very satisfactory results from treatment of a case with quinine.[11]. First, five grains of quinine dihydrochlorid were given intravenously, then four days later five grains of quinine sulphate were given three times in the day. The two cases treated at Iowa City recently were given intravenous injections of 2 per cent mercurochrome, with apparently satisfactory results.

Des Moines, May 10, 1926.

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Case History—Tularemia

Mrs. B. C. Miller, aged thirty-seven, had had a case of the "flu" during the winter which disease left her extremely weak. One of her boys shot a rabbit about two-thirds grown, which they thought would be nice for her. She said it was fine. About a week later, she took sick; and they called me about a week later than that. I found five sores about one-fourth to one-half inch in diameter on her two hands—small pus blisters which when opened had a troche-like whitish core on the bottom of the crater-like opening. I used a wet chlorozene dressing on the sores, and they did not bother her very much. The left arm developed enlargement of the glands, but on the right, one epitrochlear gland was enlarged, and the upper arm was slightly swollen and reddened which redness soon disappeared. The symptoms were typhoidal in character, aching, malaise, extreme prostration, etc. Temperature about 99° to 102°. No tenderness over abdomen, and no rose spots. She died about three weeks after the fever started.

She may have been bitten by deer flies having been in the foothills, but they said they had seen none this year. They had noticed, however, that a few rabbits were lying around dead. She did not clean the rabbit herself, that her son shot, but handled it in cooking, perhaps cutting it up. I thought one local lesion was usually the rule, but the case seemed typical.

Duchesne county, July, 1925.

Another case: A man about sixty years of age developed a small abscess back of his left ear, which had the same kind of a crater with the troche-like core (putty-like, but tough they described it—and that description fits it) on the bottom. Although, the sore was about three-fourths inches in diameter, the patient would not stay in bed as I directed him and so became very weak, but when the slight fever left, he recovered very slowly, (due to great prostration), in about three weeks.

D. P. Whitmore, M.D., Roosevelt, Utah.

THE CONQUEST OF CANCER*

E. H. Skinner, M.D., Kansas City, Missouri

It is a great pleasure to discuss one of the great physical problems of the ages frankly and fairly with the intelligent progressive minds of any community. Would that all communities throughout America gather as you have here to talk over this problem which is so often one of fear—apprehension and ofttimes ignorance.

You will agree with me however, that fear is usually a matter of ignorance, intolerance, or indifference. I intend to relieve your fear by offering facts. By presenting authoritative knowledge of the subject as conceived by the best research and clinical minds of the best physicians in all the world.

The conquest of cancer is within your hands. It can be eliminated by the same methods that have eradicated yellow fever, malaria, cholera, typhoid fever, small-pox, diphtheria, etc. Who eliminated these diseases? Not the magician, faker, the voodoo man, the Indian medicine man, the spiritualist, the manipulator, the twister, not the prayers of all Christianity. But the everlasting study, research, experiment and sacrifice of physicians. Not one physician accomplished eradication of any one disease, but the constant addition of fact to hypothesis, and the continuation of experiment upon experiment until a solution is reached—many times in a succeeding generation.

Of what use is a scientific fact unless it is applied? Smallpox will not display itself in any community which has been completely and persistently vaccinated. This is a scientific fact. It is useless unless the people agree to apply this

*A public talk before the combined Service Clubs of Burlington, Iowa, April 13, 1926.

fact. The mere legislative or legal demand is not sufficient. Each individual in a community must have his arm scratched, the virus applied and secure the proper reaction. Unless the whole people believe in this scientific law or fact and insist upon being vaccinated there is still the possibility of the disease in a community.

We can eradicate malaria by destroying the cause—likewise yellow fever—by not allowing certain mosquitoes to grow, buzz and bite. We can eliminate typhoid by insuring a clean water, milk and food supply. The origins of these common commodities can be fully protected against contamination.

We must watchfully apply our scientific facts to enjoy the benefits. Being scientific facts, they follow definite rules, regulations and restrictions. But they always work if you follow the rules with care and exactness.

But what about the conquest of cancer? I am not wandering from my theme—but I want to put your intelligent and receptive minds through a logical sequence of mental processes which will show you most conclusively that the conquest of cancer is within your reach.

The next step then is to show you that education—by reading—by example—by listening to talks such as this—is the proper means of conquering any disease. It takes a long time to disseminate facts. It takes longer to digest these facts and it takes longest to apply these facts.

Education—propaganda—campaigns over periods of years—are required to establish a public acceptance of scientific facts. The tuberculosis campaign has been waged intensively for twenty or thirty years. You have accepted and assimilated the fact that the early recognition and early treatment of tuberculosis results in the cure or arresting of the disease. You have reduced the death rate 50 per cent in twenty years. In one generation. You have been willing to listen to the facts upon tuberculosis. You have profited and assimilated the correct knowledge as presented by trained physicians, nurses and social workers with the proper scientific medical background.

My third step in this sketchy address—there will be only four—is to engage your interest in a parallel phase of medical methods. One hears the question, "Why don't some of you doctors undertake to do something with the cancer problem?"—"Why don't you work on a cure for cancer?"

Have we a cure for high blood-pressure? No—we obtain relief by proper diet, hygiene, rest and medicines and elimination of infections, and then if the patient will continue to observe certain rules, regulations and restraints he will enjoy freedom from high blood-pressure. But he is not cured. He is made symptomless.

Have we a cure for diabetes? No—but we have a treatment, a diet, a hygiene, insulin which controls the disease and permits the patient to enjoy life—if he sticks to the treatment. But insulin is not a cure. It is a method of relief.

So, you see, this matter of cure is not always possible. But control and relief of symptoms by definite methods of scientific merit and proof is possible.

You ask what is being done in the study of the cancer problem by meritorious research workers? There are millions of dollars in cancer research endowments and thousands of earnest workers in hospital and laboratory.

The Huntington Hospital at Boston—the Memorial Hospital at New York—the Institute for the Study of Malignant Diseases at Buffalo—the Barnard Skin and Cancer Hospital at St. Louis—the Middlesex Cancer Hospital at London—the Radium Institute at Paris (Pasteur's & Curies). Besides these there are battalions of workers scattered throughout the world.

What about Gye and Bernard at London? They have the idea that cancer is parasitic or infectious. But they have yet to present proof. They have the idea of vaccinating against its development. This is an idea to my liking and I hope they succeed. They are not working upon a cure for frank, well established cancer.

What about Blair Bell at Dublin? He has an injection of colloidal lead. Very intricate chemical formula. Has been working five years upon the idea and not yet able to produce a marketable chemical capable of universal application. Furthermore, he only recommends its use in hopeless cases which have passed beyond the stage of surgical removal or benefit from radium or x-ray.

What about Glover's serum? Just about died out after one or two unsuccessful spasms of recurrent advertising campaigns.

What about trypsin? Colloidal copper? All have gone the route of innumerable caravans of infantile efforts and senseless nostrums.

And now to the conquest—which rests in your hands.

The cure of cancer rests in its early recognition and in the destruction of the earliest and smallest type of lesion before it has spread to glands in the vicinity. The complete destruction of the early lesion by surgery, cautery, x-ray, radium, is possible.

What causes cancer? Irritation—this is the one great cause. It may be very difficult to un-

derstand how some cells in a local riot are an irritation without being painful, but it is so.

What are the danger signs? What are these irritations? What shall we do with them? The danger signs are:

1. Any lump, especially in the breast.
2. Any sore that does not heal—particularly about the tongue, mouth or lips.
3. Any irregular bleeding or discharge.
4. Persistent indigestion with loss of weight.

Go immediately to a hospital, or reputable physician and insist upon a thorough examination.

Don't wait to see if the condition will go away itself.

Don't allow advertising "cancer specialists" and "quack doctors" to treat you.

Don't use "patent medicines".

Don't be guided by anybody except a thoroughly competent physician.

Don't be ashamed to talk about cancer.

The right way is the only safe way.

1020 Rialto Building, Kansas City, Missouri.

ON THE USE OF GOLD IN TUBERCULOSIS

J. W. Kime, M.D., Fort Dodge

One year ago I reported, in a bulletin issued to the medical profession, and in an article published in the Journal of the Iowa State Medical Society, "On the Use of Gold in Tuberculosis", and detailed certain findings in advanced and hopeless cases of this disease.

I then reported that I had found, shortly after the administration of gold, an enormous increase in the number of tubercle bacilli in the material expectorated by the patients, that many of the discharging cells were filled with bacilli, and that, subsequently, but very few bacilli were found. The patients, though far advanced and hopeless, were benefited in many ways. Two are still alive.

As a result of these demonstrations upon patients that were known to be incurable, I then said, "I am convinced that time only will be necessary to establish the specific value of gold in early tuberculosis—a value as great as that of mercury in syphilis".

Since that report was made, we have continued the use of gold in such suitable cases as came under our observation. Many were too far advanced to use any treatment upon with any hope of relief. Such advanced cases are suffering not only from tuberculosis but from other forms of infection, which make up a combination impossible to overcome.

We are now able to report upon five cases that were in the earlier stages of the disease, and upon one who was fairly advanced. These patients are to all appearances perfectly well. (But no case of tuberculosis can be reported upon as cured until there has been no evidence of the disease present for at least five years.)

My work during the year which has elapsed since these reports were made, has more than confirmed all that I then said. In early cases of tuberculosis, I believe gold has a specific value in more than 50 per cent of the cases that come into our hands. By early tuberculosis I mean those that have bacilli present, run a temperature of 100 degrees, have a heart rate of 90, and considerable cough and expectoration. In cases farther advanced, there will be some who will be benefited but many will fail.

My experience has been such that I believe it to be our duty to see that every early case, or moderately advanced case of tuberculosis in any public sanatorium, may have the opportunity of being treated in this manner, in connection with the methods used in such institutions. The number of cures will be greatly increased. I urge this all the more because no possible harm can come to any patient from its use.

For the present at least, this method should be used only in a sanatorium where proper selection of cases may be made, where those under treatment are constantly under the observation of the physician and nurse, and where almost daily checking up by laboratory methods may be made.

Only in this manner can all the data be made up and results be made known. A promiscuous use of the method, by everybody and upon all classes of cases, can result only in failure.

Gold has for a hundred years and more been known to have value in the treatment of tuberculosis, and at times considerable enthusiasm has been aroused. But, proceeding upon a theory that was wholly wrong—that the gold attacked the bacillus and destroyed it—all such attempts necessarily resulted in failure.

Gold does not kill the tubercle bacillus, either in the body of the patient or in the test tube. Our work during the past year only confirms what I said in my preliminary report—that "gold stimulates the production of the white blood cells and increases the power of these cells to attack and destroy the bacillus."

We have been able to demonstrate this action of gold to many physicians, tuberculosis experts and laboratory workers. Under the microscope, after the use of gold, the bacilli are, for the first

few days, found in immense numbers, either in clumps and bunches or engulfed in the white blood cells. Shortly thereafter, few or no bacilli are found.

Our work is conclusive, for us—and we expect to be able fully to demonstrate to others its usefulness—that gold has great value in the treatment of early and moderately advanced cases of tuberculosis, and that it has failed in the past only because it was given in the wrong manner, in the wrong doses and at wrong intervals.

After thirty years exclusively in the field of tuberculosis, I do not hesitate to say that gold is the most valuable remedy in our hands for combating this disease. The response in suitable cases is prompt and positive. The cough, sputum and temperature are immediately markedly reduced and the whole picture of the case is changed. Appetite is increased and weight is taken on.

These conclusions are based upon evidence that can be plainly seen, both under the microscope and in the patient. And this evidence is such that we are forced to believe that gold when properly used is a specific in the earlier stages of tuberculosis and that a good majority of such cases can thus be cured.

But I wish strongly to emphasize the fact that neither gold nor any other remedy can hold out any hope to the patient who has already been consumed by this disease and whose strength and power of resistance are gone. Only failure can come from any known treatment in this stage of the disease.

It is the early case, the tuberculous individual, not the advanced consumptive, that can be reached. Few who are far advanced with this disease, can be saved.

HEART DISEASE VERSUS TUBERCULOSIS—A STUDY OF MORTALITY STATISTICS

T. J. EDMONDS, Des Moines
Executive Sec'y Iowa Tuberculosis Ass'n.

Although heart disease and cancer have forged ahead of tuberculosis within the past two years as the leading cause of death, tuberculosis still remains the most costly disease in the number of sickness days and the most fatal in the productive periods of life, according to a study of the six leading causes of death by five-year age groups just completed by the Iowa Tuberculosis Association.

The observations are drawn from the classification of deaths in five-year periods obtained from the U. S. Bureau of the Census and a compilation just completed by the division of vital statistics of the Iowa State Board of Health. They cover the years 1923 and 1924.

In 1923 the six leading causes of death in Iowa were: heart disease, cancer, cerebral hemorrhage, pneumonia, nephritis and Bright's Disease and tuberculosis. In 1924 the order was the same with the exception that cancer took first place and heart disease second.

In 1924 the respiratory group, pneumonia and tuberculosis combined, accounted for 12 per cent of the total number of deaths in the state from all causes, cancer 10 per cent and heart disease 9-16/100 per cent, showing that the diseases of the respiratory tract, when considered together, still lead as a cause of death.

The death rate per hundred thousand population from cancer last year was 97.3 and from heart disease was 96.8. The cancer death rate was nearly static, but there was a reduction of 45 per hundred thousand in the heart disease rate.

The tuberculosis rate of 39.5 was the least in the history of Iowa. Tuberculosis has shown a steady reduction since the board of control of state institutions began its educational campaign in 1906, the rate of diminution accelerated by the further impetus given by the Iowa Tuberculosis Association since its organization in 1915. The tuberculosis rate in this state in that period of nineteen years has declined 48 per cent. Iowa's death rate is less than half the rate prevailing throughout the country. The state has the third from the lowest death rate. No state east of the Mississippi has a lower rate.

A study of the deaths from these six leading diseases reveals some interesting facts.

In the age group from birth to five years, pneumonia leads with tuberculosis second. Much of the tuberculosis is of bovine origin.

In the next age group, five to nine years inclusive, pneumonia again leads with heart disease second. Medical science very recently found and announced to the general public that heart disease has its beginning in childhood. Saint Vitus dance, chorea, growing pains, rheumatism, scarlet fever and other infections, and diseased tonsils and adenoids form the basis of heart disease in later life.

Heart disease takes the lead in the third age group, ten to fourteen years inclusive, with pneumonia second.

In the next five age groups, which is the most productive period of life, from fifteen to forty, tuberculosis by far leads all other diseases, with pneumonia second in the next three. Tuberculo-

sis is responsible for nearly one-fifth of the deaths from all causes during this important span of years.

From forty on for the next twenty years, cancer leads with tuberculosis second for the first five years and heart disease second for the next fifteen.

In all the age groups after sixty, heart disease is the leading cause of death with cancer second for the first five years and cerebral hemorrhage second for the remaining periods.

All obtainable figures on the time loss show that the sickness period of each tuberculosis patient averages much higher than that caused by any other disease, and this loss is still further increased by the fact that the majority of these cases occur during the time when most people have the greatest earning capacity. The average time loss per patient is two and one-third years and in most cases there is an additional year of greatly impaired or totally absent earning capacity.

The conclusion drawn from these figures is that tuberculosis is still the most important disease and merits a continuation of the educational campaign which has succeeded in the last twenty years in cutting its death toll in half.

It is believed that the application of the same educational methods to heart disease as have proven successful in tuberculosis will afford a similar reduction.

Number of Deaths by Age-periods for the Six Principal Causes of Death

State of Iowa, 1923

(U. S. Bureau of the Census)

Age—Groups	All Causes	Heart Disease	Cancer	Cerebral Hemorrhage	Pneumonia	Nephritis and Bright's Disease	Tuberculosis
All ages	25,378	3,403	2,391	2,395	1,999	1,524	1,101
Under 5	3,987	30	5	8	519	17	47
5- 9	497	28	2	1	41	7	10
10-14	381	30	—	—	23	10	20
15-19	442	29	5	2	37	9	63
20-24	576	33	10	4	33	18	114
25-29	628	41	20	7	38	23	138
30-34	611	36	23	6	31	19	119
35-39	738	69	46	23	48	33	89
40-44	810	71	80	32	49	33	79
45-49	959	108	143	62	54	60	73
50-54	1,151	160	207	108	50	80	84
55-59	1,442	228	266	148	79	108	70
60 64	1,863	332	331	237	111	135	55
65-69	2,220	455	331	338	142	193	48
70-74	2,471	517	354	398	165	207	44
75-79	2,525	518	292	392	188	237	33
80-84	2,185	430	170	323	214	179	10
85 89	1,281	218	77	149	125	114	3
90 and over	596	68	28	65	49	41	—
Unknown	15	2	1	2	3	1	2

A BURDEN ON THE MEDICAL PROFESSION

Samuel Bailey, M.D., Mount Ayr

Recently there came into my hands a pamphlet, entitled "The Frankfort Distillery, Incorporated"; this is on the outside cover, and on the inside title page is this statement—"Something about spiritus frumenti and its medical uses", "condensed from text-books of pharmacy and therapeutics; prepared for permittee doctors by the Frankfort Distillery". Second page from this I find the following authorities, for the application of distilled spirits to medicinal uses: Hobart Armory Hare, M.D., B.Sc.; Torald Sollman, M.D.; Arthur R. Cushing, M.A., M.D., F.R.S.; Walter A. Bastede, Ph.G., M.D.; Horatio C. Wood, Jr., M.D.; Reynold Webb Wilcox, M.A., M.D., LL.D., D.C.L.; Oliver T. Osborne, M.A., M.D.; Samuel O. Potter, A.M., M.D., M.R.C.P.; George F. Butler, Ph.G., M.D.; Roberts Bartholow, M.A., M.D., LL.D.; L. J. M. Goss, A.M., M.D.

This is no doubt one of the most collossal attempts ever made to foist on the medical profession and the laity, what is alleged by these M.D.s and other long titles, that whiskey is a medicine.

There have been all kinds of attempts made for years to boost whiskey as medicine, and the latest attempt seems to be these doctors who try to have whiskey used as medicine, have resorted to the distilleries for help in a dying or dead theory, that whiskey and brandy are medicines.

The facts are that it has been well established long since, that whiskey is not a medicine, remedy, nor is it useful as a beverage. These facts have been well known and proclaimed by a great many of the leading doctors of the United States, and the best doctors, and surgeons (M. D.s), in the world are in the United States, and it is certain you will never see their names attached to distillery pamphlets that boost whiskey as medicine. It is now well known that the use of whiskey in disease is harmful; that it does more harm than good.

I quote one doctor, who no doubt is one of the ablest and most scientific doctors in the United States, and he says that whiskey is not a medicine, remedy, and is not good to use as a beverage. This doctor I refer to is W. A. Evans, M.D., Chicago, Illinois. I will now mention one doctor who is an author of many books on therapeutics and the practice of medicine, and is considered one of the great medical writers of the United States. In his book on the practice of medicine, he recommends whiskey and brandy in

one hundred and fifteen cases; now if it is so essential as a medicine why does this great author not specify how much to give, how to be given and when? He just simply says give whiskey or brandy, and in one or two cases he says give brandy with a bouquet and the better the bouquet the better for the patient. This is not the case when he prescribes medicines for in this he is quite exacting and specific, and gives in detail how much, how and when to be given.

The author of this book on the Practice of Medicine is Hobart Amory Hare, M.D., B.Sc., Philadelphia, Pennsylvania. His recommendations for the use of whiskey and brandy sounds very much like that of a man that was interested financially in the manufacture and sale of whiskey and brandy, and now he, and other doctors putting their names in a distillery pamphlet that is boosting whiskey and brandy as medicine, gives an added touch to the financial view of this move.

Those doctors putting their names in a distillery pamphlet that is boosting whiskey and brandy as medicine, is one of the most disgraceful and unprofessional affairs that has ever happened in the United States, and is a direct slap and insult to the medical profession. These doctors who signed the booze propaganda are not all members or fellows of the American Medical Association; only four belong to the Association, and the others do not, and some of the names of those who signed the pamphlet are not found in the journal directory. However the facts that these men who do belong to the A. M. A. will be often quoted as belonging to a great society, and they recommend whiskey as medicine.

Now Mr. Editor, I want this item published in the Journal, so that all reputable members and fellows in the Association, will have time to make preparation for the coming session of the American Medical Association to do something that will purge the association of whiskey and brandy boosters.

I want a line of demarkation drawn between these whiskey and brandy boosters and the thousands upon thousands of members and fellows of the association that want to keep the medical profession away up to the highest standard of honor, decency and efficiency where it belongs.

I am using the term "line of demarkation" advisably; that is a term used by doctors and surgeons to designate the line between the dying, decaying, rotting and gangrenous tissue and the tissue where there is pure blood and normal tissue.

I want the M.D.s in the American Medical Association who are trying to drag the medical profession away down to the level of the distiller, brewer, saloonkeeper, bartender and bootlegger to be properly dealt with and expunged from the society of decent practitioners of medicine.

The medical profession is by far the best in the world, of all professions, and boosting for booze will be far from adding to its dignity or honor.

PERNICIOUS ANEMIA*
With Especial Reference to the Intravenous Use of Mercurochrome

HARRY S. FIST, PH.C., B.S., M.D., Los Angeles, California

Most authorities agree that all anemias, including "pernicious" are secondary; and that the term "primary anemia", is simply an admission of ignorance of the cause. Without a knowledge of the etiology, it is practically impossible to formulate a rational method of treatment.

Shuman[1] states, "Pernicious anemia is the result of a long continued toxemia, which finally produces hemolysis and other changes". Squier[2] points out that this toxemia may be bacterial, or may be endogenous, from undigested proteins, or putrefactive poisons, entering the blood through a breach in the intestinal mucosa.

The hemolysis is demonstrable through extensive hemosiderin pigmentation in the liver and splenic pulp. The stools show increased urobilin. After subcutaneous injections of hemoglobin, there is a ready appearance of hemoglobin in the urine in larger amounts than is the case in other anemias.

In pernicious anemia, the antihemolytic properties of blood may be decreased because of a disturbance of lipoid metabolism, thus permitting a hemolytic agent to act very readily. In bothriocephalus infection, the hemolysis is due to oleic acid; in Coli communis infection, to oxyphenylethylamin. Bacillus Welchii toxins injected into the blood of monkeys, have produced changes very similar to those of pernicious anemia. The nervous system changes of pernicious anemia may be due entirely to hemolysis. It is easily seen how sclerosis of the posterior, lateral, and anterior columns, with minute hemorrhages in the substance of the cord; may have this etiology.

A search for the factors causing an anemia is not complete unless every possible cause of toxin formation be studied. Foci of infection may be present in sinuses, ears, mastoids, teeth, gums, tonsils, any part of the gastrointestinal tract or accessory viscera; kidneys, prostate or uterus,

*From the Department of Internal Medicine, service of Dr. John W. Shuman, Ward 230, Los Angeles General Hospital.

appendages or adnexa. Parasites should be the objects of careful search. It is an interesting fact that the two patients I am reporting from this hospital both gave histories of previous infestation with intestinal parasites.

Treatment

For the past fifty years, arsenic has been our best remedy. First, we used Fowler's solution, then cacodylate; and now, arsphenamine and neoarsphenamine prove to be of greater value. These latter are used just as in the treatment of syphilis, but less frequently and in smaller doses. Bramwell[3] reported, in a series of 131 cases, 33.3 per cent temporary complete recoveries with arsphenamine, and only 12.7 per cent with Fowler's solution.

Blood transfusion is a fair means of producing remissions. It requires proper matching, careful technique; and may be given either whole or citrated, into the vein, from 5 to 500 c.c., with comparative safety. Defibrinated blood, intramuscularly, 20 to 70 c.c. at a dose, is much used in Europe. Sometimes 5 c.c. of the defibrinated blood is used intravenously. Archibald[4], of the Mayo Clinic, reported 69 per cent immediately benefited by several large transfusions, and those not benefited by the first transfusion, greatly benefited by a second; a different donor being used.

Bleeding, and then infusion of normal salt solution, has been followed by great improvement of the toxic symptoms, thus indicating the toxic nature of the condition.

The use of mercurochrome, intravenously, in the treatment of pernicious anemia, has recently been reported by McLaughlin[5], who claims to have produced more marked remissions, which lasted longer than those following transfusion.

In his series of eight patients, the blood of each rose to normal or near it, and remained there; the longest time being eight months, at the time of publication of his article.

Piper,[6] who has used mercurochrome for some time in infections, is not so enthusiastic about the method as he was several years ago. He feels that its application is very limited. The drug makes no impression on the streptococcus viridans or streptococcus fecalis. Its intravenous use is not without danger. It is contraindicated in patients with impairment of kidney function, very low hemoglobin percentage, or very low resistance. It does not kill all organisms at the concentration which may be safely given, and we have no reason to suppose that it will act on toxins already present. Surgical removal of all foci of infection must be done, or the use of the mercurochrome is useless.

We wish to report four cases, two from ward 230, and two from the Soldier's Home Hospital. In these cases, every possible effort was made to locate and eliminate focal infection. The results, in brief are: two dead in spite of mercurochrome, two remissions in conjunction with its use.

Autopsies on the two who died showed the usual changes incident to pernicious anemia. Mercurochrome might have benefited these two patients if it had been used at a time when the hemoglobin was high enough to enable them to weather the reaction. One of them had hemoglobin of 10 per cent, and RBC of 600,000; the other, a hemoglobin of 25 per cent, and RBC of 800,000, at the time of administration of mercurochrome. Both had the usual violent reaction.

The two patients who survived had experienced remissions five or six months previously, without the use of mercurochrome.

King, of ward 230, age thirty-three, onset two years ago, had a blood count on admission, August, 1925, of Hb 32 per cent, RBC 1,728,000. Color index was 1.04 on admission and 7.5 on discharge. September, 1925, he was given 10 c.c. of mercurochrome intravenously. Reaction was violent, with vomiting, diarrhea, chills. RBC at this time, was 1,500,000. Three weeks later RBC 3,000,000. He was discharged in November, 1925, with hemoglobin 60 per cent, RBC 4,000,000. Focal infection of tonsils and teeth were cared for, and patient had lived in the sunshine.

Witherspoon,[7] of the Soldier's Hospital, had RBC of 500,000 a year ago. Four months ago, he showed RBC 900,000, and Hb 35 per cent. His teeth, tonsils, and bleeding hemorrhoids had been cared for, and he was on the upward grade. Three months ago he was given 20 c.c. of 1 per cent solution of mercurochrome intravenously. A severe reaction was followed by gradual improvement, till now, in the hospital, his RBC of 3,800,000 and Hb of 85 per cent, show him to be in very much better condition.

In conclusion: Mercurochrome is of doubtful efficacy in the treatment of pernicious anemia.

Probably much of its effect is the result of the reaction, as is the case with parenteral injections of milk proteins; for injections of diphtheria antitoxin have been known to produce remission.

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The Journal of the Iowa State Medical Society

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OFFICE OF PUBLICATION, DES MOINES, IOWA

Vol. XVI July, 1926 No. 7

Not long ago we published a letter from one of our members setting forth the objections to hero worship. He said that the men who come home from the war, who risked their lives in the efforts to kill the enemy were the people that the general public delighted to honor. He mentioned the millionaire and most of the great people of the earth, and bewailed the fact that the medical practitioner subjected himself to all the risks of the hero without receiving any of their honors, that he exposed his life in his everyday rounds of practice and especially in times of stress. After mentioning all this he asked, "What is going to be done for the medical profession?" The only person that the public is interested in are the men who can take care of themselves.

We thought as we read this letter, what does the medical profession expect, who is going to do for them, and then we thought of the things that come directly under our eyes, the organization of local doctors, the local county medical society. We are informed that in several counties the doctors meet irregularly and discuss immaterial questions. There is no doubt but that the medical profession can draw to themselves a large interest if they would combine in close organization. When we find that the county medical society wields but little influence in the county we soon discover the secret if we seek for it. There is too much ill feeling. The doctors are not free enough in their everyday association, and the feeling is often so great that one man to gain an advantage over another, may be willing to let the whole organization go to ruin. While it is probably true that medical doctors in their everyday intercourse with the public rarely become heroes, yet they can wield an influence that will satisfy our correspondent.

No doubt the world is changing, and the securing of honors on the basis of merit, is growing more difficult, and it may be admitted that the influence of money is becoming more powerful. It is not to be supposed that men enter the medical profession for its financial attraction, but for service in congenial lines. It is true that some fortunate individual practitioners gain wealth and distinction but the number is too small to be an important factor in determining the life work of many young men.

Those who were fortunate enough to hear Dr. Bierring's address before the recent meeting of the Iowa State Medical Society will bear witness to the tribute accorded to those who in early days devoted themselves to human welfare and were not forgotten even in these days.

A further thought occurs to us, suggested by legislation which threatens the freedom of medical practice; in the use of certain drugs—we refer to narcotics and alcohol. The position and reputation of the medical profession should be so clear that no question should arise as to the honor of the individual practitioner, who should be granted the complete exercise of his best judgment in the administration of powerful medicine. Notwithstanding the greater freedom of the English physician in the use of narcotics, opium addicts are much less in England than the United States.

If our physicians do not discover means of taking care of themselves by union and organization, the public will in no distant day feel the wisdom of state direction of the practice of medicine, state medicine. The public see the necessity of physicians but may they not see, to them, a better plan to secure such service, doing away with the individual private physicians?

HISTORY OF MEDICINE IN IOWA

We desire to call attention again to a History of Medicine in Iowa from the first appearance of medical men in Iowa, territory west of the Mississippi river, up to 1880, with some more recent obituary notices and biographies.

The first doctors noted in the history of Iowa were surgeons connected with the United States Army, at a period of about 1820, but from 1830 to 1840 a number of notable doctors came to

Iowa for one purpose or another, some for the adventure of it, some to help develop a promising territory and incidentally to practice medicine, and others for the primary purpose of practicing medicine. These men were all vigorous and intellectual men, men of courage and full of resourcefulness.

For another purpose than writing a history of medicine in Iowa; fifty years ago we collected data from physicians still living concerning the pioneer doctors of their communities, biographies, surgical operations, contributions to literature, offices, civil and medical, contributions to the development of the territory and state. We looked up the organization of medical schools, medical societies and many other things of interest to the medical profession. This will make a book of about 450 pages. It will be a small edition limited to 250 copies.

STRENGTHENING NARCOTIC LAW

In this number of the Journal we have called attention to the objections urged against the bill now before Congress to strengthen the Harrison Law.

On May 24th representatives from the American Pharmaceuticeal Association and representatives from the American Medical Association appeared before the Ways and Means Sub-committee of the House of Representatives in opposition to the Treasury Department Bill. These representatives presented the objectional features of the bill which would increase the burden to both physicians and pharmacists.

We would suggest that members of the medical profession examine the bill which we have presented in this number and after informing themselves of its objectional features take the matter up with their members of Congress to prevent its passage.

STRENGTHENING THE HARRISON NARCOTIC LAW

From the department of medical economics of the Journal of the A. M. A. we take the following account of what is to be provided in a new act now before Congress. This is of great importance to the medical profession in relation to prescribing narcotic drugs. The opinion rendered by the United States Supreme Court has shown that the original act was a revenue act and gave a wide latitude to a physician's responsibility in interpreting the Harrison Narcotic Act.

A bill to strengthen the Harrison Narcotic Act of December 17, 1914, as amended, and for other purposes, S. 4085, was introduced in Congress, April 24, at the instance of the Treasury Department. The purpose of this bill, says assistant secretary of the treasury Andrews, is "to clear up certain points of the government". These points are to be cleared up (1) by requiring collectors of internal revenue to refuse registration to physicians whom they believe narcotic addicts; (2) by requiring pharmacists to determine whether physicians' prescriptions were or were not issued in the course of professional practice, and to refuse to fill such as the pharmacist may reasonably suspect of not having been so issued; (3) by compelling physicians to keep records of every dose of any narcotic dispensed by them, except such as may be dispensed in emergency cases; (4) by forbidding everywhere the ambulatory treatment of narcotic addicts; (5) by requiring physicians to keep records of all purchases of so-called exempt narcotic preparations, and (6) by denying registration for a period of from one to two years to any physician convicted of any violation of the Harrison Narcotic Act.

Any collector of internal revenue, if this bill is enacted, must refuse to register under the Harrison Narcotic Act any narcotic addict. No preliminary notice and hearing are required. No grace is granted the unfortunate addict undergoing treatment in the hope of cure. Discretion is not allowed the collector. A narcotic addict cannot register, and the collector must act on such evidence as he has. The physician refused registration is left to redress in court, with all the publicity and loss of professional prestige which that procedure entails.

The laws of many states already provide that licenses to practice medicine may be revoked if the licentiate is a naroctic addict. The Treasury Department presumably has knowledge of addicts holding such licenses, or it would not have asked the right to refuse registration to such persons. Its field officers, however, instead of being charged with the duty of initiating action before state licensing boards looking toward the revocation of such licenses, are expressly instructed not to do so. That the disclosure of the information they possess is not unlawful is shown by the fact that they may disclose it on request of a state licensing board. But the Treasury Department keeps these boards in darkness. Why it thus refuses to avail itself of existing agencies effectually to bar narcotic addicts from practice, while it seeks authority to accomplish the same end to a limited extent through this legislation, is difficult to understand. The only guess that can be hazarded is that while the evidence of addiction in possession of the Treasury Department may satisfy some lay collector of internal revenue, vested with arbitrary power, as to the habits of would-be registrants, it would be of doubtful value if submitted to an impartial tribunal of physicians, when the registrant could introduce evidence on his own behalf.

The fact that Congress may not have authority to confer on the Treasury Department the power it

here seeks does not seem to have occurred to those who drafted this bill. To determine who is and who is not fit to prescribe, administer and dispense narcotic drugs is to regulate the practice of medicine, whether that determination is based on supposed narcotic addiction or on any other grounds; and the regulation of the practice of medicine within a state is beyond the power of Congress. The United States Supreme Court states the case thus:

The declared object of the Narcotic Law is to provide revenue, and this court has held that whatever additional moral end it may have in view must "be reached only through a revenue measure and within the limits of a revenue measure". Congress cannot, under the pretext of executing delegated power, pass laws for the accomplishment of objects not entrusted to the federal government. * * * Obviously, direct control of medical practice in the states is beyond the power of the federal government. Incidental regulation of such practice by Congress through a taxing act cannot extend to matters plainly inappropriate and unnecessary to reasonable enforcement of a revenue measure.—Linder vs. United States, 268 U. S. 5, decided, April 13, 1925.

Every prescription issued by a physician for a narcotic drug will be subject to review by any pharmacist who may be called on to fill it, if the pending bill is passed. If there are present "circumstances from which the dealer might reasonably deduce that the prescription was not issued by the physician, dentist or veterinary surgeon in the course of his professional practice only", the pharmacist cannot lawfully fill it. It is not necessary that the pharmacist actually deduce that the prescription was not issued in the course of professional practice; it is sufficient that he might reasonably do so. What constitutes "the course of professional practice only", the bill does not state. It presumes apparently that any pharmacist can determine in his pharmacy what took place in the sick room or in the physician's office and that he is sufficiently acquainted with the normal course of professional practice to be entrusted safely with statutory authority to refuse to any sick person medicine that the attending physician has prescribed.

The pending bill provided that every physician shall keep a record of all narcotic drugs he dispenses or distributes, no matter how small the amount may be, except in emergency cases. The law now does not require the physician to keep a record of the narcotic drugs he dispenses or distributes in the course of his professional practice to patients on whom he is in personal attendance, except the so-called exempt narcotic preparations. The Treasury Department, it is true, undertook at one time by regulation to require physicians to keep a record of narcotic drugs dispensed to office patients. The United States Circuit Court of Appeals, Eighth Circuit, however, April 14, 1922, denied the right of the department to impose any such requirement (Hurwitz vs. United States, 280 Fed. Rep. 109).

A physician cannot, if the pending bill is enacted, dispense or distribute narcotic drugs pursuant to the so-called ambulatory treatment of narcotic drug addiction. Here again, apparently, the proponents of this bill have overlooked the right of each state to regulate the practice of medicine within its own borders. If the federal government can through its taxing power determine who may and who may not prescribe narcotic drugs, by eliminating narcotic addicts or otherwise, it may in like manner determine who may and who may not prescribe drugs of any other kind. If, under its taxing power, the federal government can determine how narcotic addiction shall not be treated in the states, it may in like manner determine how every other disease may and may not be treated. If, then, the federal government can tell the people of the states who shall and who shall not treat them, and how they may and how they may not be treated, our state medical practice acts may soon be superseded by federal statutes.

Physicians who dispense the so-called exempt narcotic preparations must, if this bill is enacted, keep records of all purchases of such preparations, in addition to the records of sales, exchanges and gifts, which they are now required to keep. The additional burden of keeping a record of purchases may not be great. It may well be asked, however, what good is to be accomplished by such a record so long as the law allows anyone to buy the exempt preparations without physicians' prescriptions and without identification.

Probably the most objectionable feature in the pending bill is the provision that any physician convicted of having violated any of its terms or any provisions of the Harrison Narcotic Act as it now stands will be absolutely denied registration for a period of one year from the first day of July next following the date of such conviction. This is in addition to the penalties now authorized by law, a fine not exceeding $2,000, imprisonment not exceeding five years, or both, in the discretion of the court. Fine and imprisonment are discretionary. The refusal of registration is not. If a physician overlooks the renewal of his registration on or before July 1, and without reregistration prescribes a narcotic on the following day, he has violated the Harrison Narcotic Act. If some narcotic field officer prosecutes the physician for this lapse, the physician may be convicted. The court may impose a minimum fine, or even suspend sentence. But under the proposed law, registration could not be granted to that physician for from one to two years after conviction. This proposed deprivation of the right to prescribe narcotics for from one to two years has greater significance than appears on the surface. It would vest in the Treasury Department almost unlimited power to force compromises of cases by physicians supposed by the department to have violated the law, no matter how flimsy the evidence of such violation might be. Physicians threatened with prosecutions and informed as to the uncertainties of court procedure, rather than face the possibilities of

convictions and the certainty, in event of conviction, of deprivation of the right to use narcotic drugs in their practices for a year or two, would readily pay large amounts to the Treasury Department by way of compromise, as is authorized by law. By so doing they would avoid the possibility of conviction and the loss of the right to use narcotics. And the Treasury Department would thus avoid the necessity of having to prove its cases in court to the satisfaction of impartial juries.

The denial of the right to register under the federal law, proposed in this bill, apparently ignores the opinion of the United States Circuit Court of the Northern District of Georgia:

But to prohibit a practicing physician from prescribing narcotics unless he registers, and then refuse to register him, would, to that extent, be to prohibit and regulate his practice of medicine, a thing within the province of the state, and not of the United States, and in contradiction of the revenue purposes of the act.—Starnes vs. Rose, 282 Fed. Rep. 336, decided, July 21, 1922.

On the whole, this legislation seems to have been conceived in disregard of the fact that the "certain points which have been raised in certain courts to the disadvantage of the government" have been based on the constitution, which an act of Congress cannot alter. It seems to disregard the fact that the keeping of records by physicians will not automatically enforce the Harrison Narcotic Act, but that it can be enforced only through the energy and intelligence of the officers and employes of the Treasury Department assigned to that duty. It seems to disregard the fact that registrants who would unlawfully dispense or administer narcotic drugs would without compunction falsify their records. The medical profession yields to no class in its willingness to submit to burdens calculated to diminish narcotic drug addiction. Evidence is not available, however, to show that the burdens proposed by this bill would do so. Until such evidence is forthcoming, the medical profession may be expected to oppose the enactment of this bill.

State medical associations, county medical societies, and physicians may well communicate their views with respect to this bill to the President, the Secretary of the Treasury, the Committee on Finance of the Senate, and the Committee on Ways and Means of the House of Representatives, and to their respective senators and representatives.

A BILL TO STRENGTHEN THE HARRISON NARCOTIC ACT

S. 4085

69th Congress, 1st Session

IN THE SENATE OF THE UNITED STATES

April 19 (calendar day, April 24), 1926, Mr. Smoot introduced the following bill; which was read twice and referred to the Committee on Finance.

A BILL

To strengthen the Harrison Narcotic Act of December 17, 1914, as amended, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Harrison Narcotic Act of December 17, 1914, as amended, be further amended as follows:

Section 1. Strike out the period at the end of the fourth paragraph of section 1, substitute a colon, and add the following: "Provided, That any person addicted to the habitual use of opium or coca leaves, or any compound, manufacture, salt, derivative, or preparation thereof, when such use is not in the course of professional practice only, shall not be allowed to register under this act: And provided further, That in addition to any penalty which may be imposed under section 9 hereof, any person hereafter convicted of a violation of this Act shall not be granted registration under this Act for a period of one year from the first day of July next following the date of such conviction."

Sec. 2. That the second clause of the twelfth paragraph of section 1 be changed to read as follows: "and the absence of appropriate tax-paid stamps from any of the aforesaid drugs shall be prima facie evidence of a violation of this section in the judicial district where such drugs are found by the person in whose possession the same may be found."

Sec. 3. Section 2, subsection (a) is hereby amended to read as follows: "To the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist, or veterinary surgeon registered under this Act in the course of his professional practice only: Provided, That no dispensing or distribution of the aforesaid drugs pursuant to the so-called ambulatory treatment for narcotic drug addiction shall be construed to be in the course of his professional practice only: Provided, That such physician, dentist, or veterinary surgeon shall keep a record of all such drugs dispensed or distributed, showing the amount dispensed or distributed, the date, and the name and address of the patient to whom such drugs are dispensed or distributed, except such as may be dispensed or distributed in emergency cases only; and such record shall be kept for a period of two years from the date of dispensing or distributing such drugs, subject to inspection, as provided in this Act."

Sec. 4. Section 2, subsection (a), is hereby amended by inserting the following proviso after the first clause and before the first proviso thereof: "Provided, That such drugs shall not be sold, dispensed, or distributed under circumstances from which the dealer might reasonably deduce that the prescription was not issued by the physician, dentist, or veterinary surgeon in the course of his professional practice only: And"

Sec. 5. The first sentence of the second proviso of section 6 is hereby amended to read as follows:

"Provided further, That any manufacturer, producer, compounder, or vendor (including dispensing physicians) of the preparations and remedies mentioned in this section shall keep a record of all purchases, sales, exchanges, or gifts of such preparations and remedies in such manner as the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall direct."

Sec. 6. That in the enforcement of the Act of Congress of December 17, 1914, known as the Harrison Narcotic Act, as amended, the provisions of section 3450 of the Revised Statutes shall apply, in so far as they are in anywise applicable thereto, and the said provisions of said section are hereby reenacted for that purpose.

RESOLUTION ADOPTED BY THE WHITE CROSS INTERNATIONAL ANTINARCOTICS SOCIETY

34 West 49th Street, New York City

Whereas there was introduced in the Senate of the United States on April 19 (Calender day April 24) 1926, a bill (S 4085) to strengthen the Harrison Narcotic Act of December 17, 1914, as amended; and

Whereas it would seem desirable for the Congress of the United States, in connection with the consideration of such proposed amendatory legislation, to review the field of narcotic regulation with a view to adopting legislation which will conform the regulation of such trade to the situation as developed by such an investigation,

Now, Therefore, Be It Resolved, that The White Cross, Inc. request Hon. Reed Smoot, a member of the Senate, to secure opportunity for hearings on Senate Bill 4085, at such time as will facilitate full representative expressions by those interested in the narcotic problem and in case further inquiry is thought advisable then Mr. Smoot is requested further to obtain a federal investigation, by a committee to be appointed for that purpose, of the narcotic situation in this country, with a view to obtaining a better understanding of the narcotic evil, and the adoption of such legislation as such an investigation will suggest.

The foregoing resolutions were adopted at a meeting of the board of directors of The White Cross, Inc., International Antinarcotics Society, in New York City, May 1, 1926.

Wm. K. McKibben, Sec'y.

MEDICAL SOCIETY OF THE MISSOURI VALLEY

The thirty-ninth annual meeting of the society, to be held jointly in Omaha and Council Bluffs, promises to be one of the most important sessions of this time honored organization. The Missouri Valley Medical Association has been for many years an organization for the dissemination of medical knowledge and exchange of ideas among the profession of the states lying wholly or in part in the great Missouri river basin. Last year a remarkable program was given by this society in St. Joseph, Missouri. For variability and value of material presented it was equal in quality to that given at the great session of the Tri-State at St. Paul a month later. The contributions to this program by the various departments of the Universities of Missouri, Kansas, Iowa and Nebraska were of a high order. This session did not receive the appreciation that was its due from the profession of the region.

The Universities of Missouri, Kansas, Iowa, Nebraska and Creighton University have promised for this year short, snappy contributions on subjects applicable to the day's work of the practicing physician. It is imperative that the practitioner be kept acquainted with the work going on in the laboratories, and there is no better way of maintaining this contact than by having the laboratory teachers in our medical schools appear and present "their stuff" at frequent intervals before associations composed of practitioners.

The program planned for the Omaha-Council Bluffs meeting will consist of papers and lectures on various scientific and clinical subjects and clinics. Fully half of the time will be devoted to clinics given by men of national reputation. Among those who have already consented to appear on the program and hold clinics are: Dr. Hilding Berglund, professor of internal medicine at the University of Minnesota, Minneapolis; Dr. Elliott C. Cutler, professor of surgery of Western Reserve University, Cleveland; Dr. Irving S. Cutter, dean of Northwestern University College of Medicine, Chicago; Dr. McKim Marriott, professor of pediatrics of Washington University, St. Louis; Dr. E. C. Rosenow of the University of Minnesota, Mayo Foundation, Rochester, and Dr. Gabriel Tucker of the Bronchoscopic Clinic of the University Hospital, Philadelphia.

Negotiations are under way with several other men of equal prominence in their respective lines.

The program committee will make this meeting one that no up-to-date clinician can afford to miss. A complete program will be published in ample time. Reserve the dates now—September 15-16-17. Headquarters—Hotel Fontenelle, Omaha. Dr. A. D. Dunn of Omaha, is president. The program committee is composed of: John E. Summers, Omaha, chairman; Donald Macrae, Council Bluffs, vice-chairman; William Wherry, Omaha, Nebraska; P. T. Bohan, Kansas City, Missouri; E. H. Skinner, Kansas City, Missouri; T. G. Orr, Kansas City, Missouri; J. M. Mayhew, Lincoln, Nebraska; Granville N. Ryan, Des Moines, Iowa; Guy L. Noyes, Columbia, Missouri; Fred Smith, Iowa City; John M. Bell, St. Joseph, Missouri. Arrangement committee: Earl Sage, Omaha, Nebraska; M. E. O'Keefe, Council Bluffs.

Chas. Wood Fassett, M.D., secretary, 115 East 31st street, Kansas City, Missouri.

Minutes of the Iowa State Medical Society Seventy-fifth Annual Session May 12, 13, 14, 1926 Des Moines

Wednesday, May 12, Morning

The members of the Iowa State Medical Society convened in annual session at Hotel Fort Des Moines, Des Moines, Wednesday morning, May 12, 1926, not only for the purpose of scientific study and social entertainment, but that they might fittingly observe the Diamond Jubilee Anniversary of the founding of the Society.

The Society was called to order at 9:00 o'clock by the President, Dr. Smith A. Spilman, Ottumwa. The meeting was opened with invocation by Rev. Herbert Scott, D.D., Des Moines, Pastor, First Methodist Episcopal Church.

The Address of Welcome for the city was given by Mr. Harvey Ingham, Des Moines, editor, The Des Moines Register, as follows:

Ladies and Gentlemen: It is a great pleasure to me to represent the city in welcoming you to Des Moines. In coming to these annual conventions we are merely following a custom as old as the human race. In the very beginning of time the people periodically came from the hills and gathered at their market place to trade and to have social enjoyment and amusement, and that was the beginning of the modern city.

Des Moines is getting to be a great convention city. It is entertaining more and more of these annual gatherings in order that people may trade their wares and also have a good time. We hope that you will have a profitable meeting and also that you will enjoy your visit here.

You are meeting in the heart of the Corn Belt. Let us consider for a moment what "the Corn Belt" means. It is the richest valley of the world, and, being under the control of man, it is necessary for him to eradicate certain noxious forms of life, such as burdocks, Canada thistles, quack grass, etc., in order that corn may be grown. In growing corn, we will say that there are only three stalks to a hill and that the hills are the proper distance apart. We are ever utilizing the laws of nature in the Mississippi Valley. The logic of the Corn Belt goes much farther than we have yet applied it. Are we vigorously enough exterminating the noxious elements, and are we right in limiting the young corn to three stalks to a hill in order to raise the finest kind of corn? If we are attaining our objective, then the answer must be in the affirmative. If we are on the right track, then you are engaged in the main business of life. If we are right in exterminating those elements which are harmful to the growth of corn, then you are right in exterminating all the inimical factors which injure the growth of the human race. Is not that the real job for human intelligence—to so utilize the laws of nature as to exterminate the inimical and to encourage the strong. This opens up a field that is practically limitless in extent. If we have in large measure eliminated diphtheria and scarlet fever, the united intelligence of the human race could exterminate nearly all the really threatening elements which have afflicted the human race. It seems to me that is the work to which we are committed—to so direct the forces of nature as to build the strong and eliminate the inimical. If man would simply stop warring against himself, and war against those things which are harmful to himself, we could make the conditions of life much more favorable than they are today. My friends, the Mississippi Valley bears no relation to what it was sixty years ago. The whole theory pertaining to the forces of nature has been remodeled, and with the same sort of scientific cooperation on the part of society we could do for the entire human race what we have done for the Corn Belt in the last sixty years. Is not that what we are here for? We have only two purposes: To care for ourselves and family, but above that we like to connect what we are doing to the larger purposes of the human race. And what man or woman is engaged in a work so useful as that of the physician? What scientific man has devoted himself to such a great purpose as the physician? You are engaged in the largest undertaking there is, your minds are directed to the greatest problem in the world, and I welcome you to this city not because you will have a good time or consider more intimately the concerns of your own organization, but because at these meetings you come to a larger appreciation of the problems confronting us all, to the end that in the near future we may make a Mississippi Valley of the whole world.

Dr. Thomas A. Burcham, Des Moines, President of the Polk County Medical Society, on behalf of the local profession extended to the visiting members the following words of welcome:

Mr. President, Gentlemen and Ladies: It is always a pleasure to the Polk County Medical Society and to the Program Committee to entertain the members of the profession in our city. It is always very profitable for us to get together and talk things over, hear what the other man has to say and gain the knowledge which our confreres bring to us. This year our Diamond Jubilee has given us an occasion for greater effort on the part of the profession and Program Committee to offer you a program which is somewhat different from that usually presented. The men who are to furnish it are most welcome to our city. Our knowledge is gained from what we either read or get from other individuals. So during this meeting the opportunity comes to us to gain first-hand knowledge from clinicians of world-wide experience. We welcome the visiting members of the Society who have come here for the purpose of hearing these clinicians, and I know that you will all derive great benefit and profit from hearing them. It is also a great pleasure to entertain the ex-presidents of this organization at this our Diamond Jubilee Anniversary. Their mere presence

is always a stimulation and an inspiration to the younger men of the profession, who are always anxious for their advice and counsel. I hope that your stay in our city will be most enjoyable and profitable.

Dr. Chas. Henry Magee, Burlington, representing the visiting members, responded as follows:

Mr. Chairman: The Program Committee has grasped the situation remarkably well in choosing the speakers in these preliminaries. First there should be an eloquent man, and selecting the editor of The Register was very appropriate. Then there should be a scholarly man, and Dr. Burcham fills this requirement. Last though not least there should be a handsome man, but modesty forbids me to pursue this thought further.

During the past year I have become convinced that the center of medical thought has shifted to this country. There were indications of this change in the earlier years of this century. Those of us who attended the great clinics of Chicago, Cleveland, Boston, Philadelphia and Rochester, will call to mind the crowds of visitors from Europe and South America. The world war merely hastened the inevitable.

Of the influences which led to this result was the battle waged by the A. M. A. for a higher standard of medical education, to our statesmen who have been generous in appropriations to schools of medicine, to such benefactors as Johns Hopkins, Rockefeller and Vanderbilt, who have so bountifully endowed universities and research laboratories, and lastly to those great intellects, Nicholas Senn, Murphy, Fenger, Crile, Deaver, and the Mayos, who have lifted surgery and surgical teaching to a lofty plane.

The A. M. A. succeeded in its efforts because it was effectively aided by the State Societies, one of the chief being the State Society of Iowa, its influence being due to the leaders of medical thought throughout the state and to the militant corps of instructors at the State University and the wide-awake county societies.

From among the many splendid county societies I wish to select one, because it has done so much to add interest to our State meetings, and that is the Polk County Medical Society. Nothing has been too laborious or expensive for its members to do, provided it added to the success of the meetings. Not only have they aided the officials in bringing men of world-wide reputation to our meetings in Des Moines, but they have gone to the most painstaking care to provide for our social entertainments. Not only have the medical men contributed to this, but the laymen and the splendid women of Des Moines have aided like veterans. And I must mention, too, the managements of the elegant hostelries—the Savery, the Chamberlain, and the Hotel Fort Des Moines—for what they have contributed to our comfort.

One more word. I have spoken of the brilliant leaders of the profession of the country and of the state of Iowa. There is yet another man I wish to mention, the country doctor, the "Minute Man" of the profession. The man who is bounced out in the middle of the night to deliver a housewife or set a limb; who gets home at sunrise, covered with mud, and unconscious of the fact that he is in the footsteps of the Great Physician. Let me say of him in the language of Marc Antony: "This is the noblest Roman of them all". He is a thoroughbred. He is courage incarnate. He is the "noblest Roman of them all".

Dr. Allen Buchner Kanavel, Chicago, gave a clinic on "Surgery of the Hand". Dr. John W. Martin, Des Moines, Chairman.

Dr. Max Aaron Goldstein, St. Louis, gave an Otolaryngological Clinic, consisting of a demonstration of the methods employed in teaching the deaf, presented by Mrs. Smalley, Superintendent of the School for Deaf Children, Des Moines. Dr. William W. Pearson, Des Moines, Chairman.

Dr. William J. Mayo, Rochester, gave a clinic on "Portal and Biliary Cirrhosis". Dr. Oliver J. Fay, Chairman.

Wednesday, May 12, Afternoon

The meeting was called to order at 1:30 p. m. by the President.

Dr. Allen B. Kanavel, Professor of Surgery, Northwestern University Medical School, Chicago, gave an address on "Experiences in Neurologic Surgery".

Dr. Jabez N. Jackson, President-elect of the American Medical Association, addressed the Society on "Tumors of the Breast".

An address on "Problems of the Deaf" was then given by Dr. Max Aaron Goldstein, St. Louis.

Dr. Albert R. Mitchell, Trustee of the A. M. A., Lincoln, Nebraska, read a paper on "Tomorrow Is Also a Day".

Dr. William J. Mayo, Rochester, presented an address on "The Twilight Zone of Medicine".

Wednesday, May 12, Evening

Following the annual banquet which was attended by members, wives and friends, Rev. H. N. Geistweit, First Baptist Church, Des Moines, gave an address on "A Plea for Some Old-Fashioned Diseases".

Thursday, May 13, Morning

The meeting was called to order at 9 o'clock by Dr. E. T. Edgerly, Ottumwa, Acting Chairman.

Dr. Charles A. Elliott, Chicago, gave a clinic on "Diseases of the Thyroid Gland". Chairman, Dr. Addison C. Page, Des Moines.

Dr. William Allen Pusey, Chicago, gave a Dermatological Clinic. Dr. Harry C. Willett, Des Moines, Chairman.

Dr. John B. Deaver, Philadelphia, gave a surgical Clinic, Pelvic and Abdominal. Dr. John C. Rockafellow, Des Moines, Chairman.

Thursday, May 13, Afternoon

Dr. Charles A. Elliott, Chicago, gave a talk on "Periodic Health Examination—A Clinical Demonstration".

Dr. R. P. Forbes, Denver, owing to the illness and unavoidable absence of Dr. F. P. Gengenbach, addressed the Society on "The Rural Pediatrician".

Dr. William Allen Pusey, Chicago, read a paper on "Our Changing Conceptions of Eczema".

Dr. Geo. Elmer Price, Spokane, read a paper on "Epidemic Encephalitis".

An address on "The Correlation of Clinical and Pathological Findings in Cardiovascular Disease", was presented by Dr. Paul Dudley White, Boston.

Dr. John B. Deaver, Philadelphia, read a paper on "The Romance of Surgery".

Thursday, May 13, Evening

The meeting was called to order at 8 o'clock by Vice-President Frederick G. Murray. The President's Address was then presented by Dr. Smith A. Spilman.

Dr. Walter L. Bierring, Des Moines, read a paper on "A Diamond Jubilee", in which was presented an impressive historical review of important incidents connected with the work of and the hardships endured by the pioneer practitioners of medicine in the State of Iowa.

On behalf of the Society, the Secretary addressed words of appreciation and thanks to the distinguished guests who had so generously responded to the invitation extended by the Program Committee to be present and help celebrate the Diamond Jubilee Anniversary, and whose offerings in the way of addresses and clinics had made up the entire scientific program. A memento of the occasion, in the form of a special medallion, was then presented to each of the guests of honor.

In connection with the presentation of Past Presidents, the Secretary gave a brief biographical sketch of each, at the same time throwing on the screen photographic reproductions illustrating various periods in the life of each future president of the Society. In conclusion, on behalf of the Society the Secretary presented to each a memento in the form of medallion charm, stating that the token was but the objective evidence of the love and esteem of the members of the Society which the recipients had honored and over which they had at some time presided in its deliberations.

With Dr. Charles Ryan presiding, the Society proceeded to that part of the program which included the awarding of prizes.

Upon making a canvass of the house, Dr. O. W. Lowery, Des Moines, received the prize for the oldest member present.

The following committees were appointed:

To act as judges in awarding a prize for the best story pertaining to medical experiences: Drs. H. C. Eschbach, E. T. Edgerly and Prince E. Sawyer.

To act as judges in awarding a prize for the best antique medical and surgical exhibit: Drs. D. S. Fairchild, William A. Pusey and Lewis Schooler.

Dr. Charles H. Magee, Burlington, was awarded the prize for the best story.

Prizes for the best antique medical and surgical exhibit were awarded to Dr. C. A. Boice of Washington, books and saddlebags; Dr. Parker, microscope; Dr. Tom M. Throckmorton, Chariton, home made wooden splints.

Friday, May 14, Morning

The meeting was called to order at 9 o'clock by the President.

Dr. Roy P. Forbes, Denver, gave a Pediatrics Clinic on Faulty Posture and Malnutrition. Dr. Fred Moore, Des Moines, Chairman.

Dr. George Elmer Price, Spokane, presented a Neurological Clinic. Dr. Tom B. Throckmorton, Des Moines, Chairman.

Dr. Paul Dudley White, Boston, gave a Cardiac Clinic. Dr. Merrill M. Myers, Des Moines, Chairman.

In presenting President-elect Thomas E. Powers for induction into the office of President of the Society, Dr. Bierring said:

"Mr. Chairman: It is the pride of the membership of this Society that our members at all times have dignified service in any way that it came to them. This colleague whom you now induct into the highest office in the gift of this Society has sacrificed his time and service for the benefit of medical legislation, and that in itself will be his monument in the improvement of laws for the regulation of practice and the gradual restriction of irregular practice."

Dr. Spilman: "Dr. Powers, I am most happy to invest you with this gavel, the emblem of your authority, and I know you will yield it with justice and prudence and with the greatest of benefit to all concerned."

President Powers: "I want to thank the Society for the honor that has been conferred upon me. To be the temporary head of a body of intelligent, scientific men such as compose the Iowa State Medical Society, I consider far greater than any political preferment that could be given to anybody. And I want to repeat what I said a year ago—that if I am to attain any degree of success in the conduct of affairs during the coming year it will be only with your cooperation."

Adjourned.

Tom B. Throckmorton,
Secretary.

Transactions House of Delegates Iowa State Medical Society

Seventy-Fifth Annual Session, May 12, 13, 14, 1926 Des Moines

First Meeting, Tuesday, May 11

The House of Delegates met in the Oak Room of the Hotel Fort Des Moines and was called to order at 1:40 p. m. by President Spilman. Owing to the Society celebrating its Diamond Jubilee Anniversary, President Spilman had called for a pre-sessional meeting to be held on this date.

Roll called showed the presence of 73 delegates and 14 officers, making a total of 87.

The President announcing that a quorum was present, the House then proceeded to the transaction of business.

The minutes of the Friday morning session held in Des Moines, having been published in the July, 1925, issue of the Journal, were considered to have been given sufficient publicity, and were accordingly held approved as published.

REPORTS OF OFFICERS

The Secretary, Dr. Tom B. Throckmorton, presented his report, which, upon motion duly seconded and carried, was accepted and such portions of the same as referred to finances were referred to the Finance Committee.

REPORT OF THE SECRETARY

To the Members of the House of Delegates of the Iowa State Medical Society:

The following report for the year 1925-26 is respectfully submitted:

The year's work just closed has witnessed no radical departure from the usual routine work performed in the office of your Secretary. The work, however, which centers about the various secretarial duties has doubled and trebled. Each year brings new demands as medicine becomes more organized, state and national. Perhaps some conception of the clerical work carried on by this office may be conveyed to your minds when I state that over 12,000 letters were sent out last year, besides the addressing and sending of 2400 copies of the Manuals on Periodic Health Examination. Consistent daily attention to the work of the office has been demanded and has been given with the result that the profession in Iowa is better organized and understands more fully what the Iowa State Medical Society is trying to do for its members, singly and collectively, than ever before.

The work of the Secretary's office has been very materially aided this past year by the purchase of an addressograph. The Board of Trustees very generously authorized the purchase of a motor driven machine, with the result that many thousands of pieces of mail were addressed with the saving of much time and effort. Since February of this year the Journal wrappers have all been addressed in the Secretary's office, thus assuring accurate addressing at a saving of about $15 per month on the printer's bill.

Membership

As reported last year, the membership growth must of necessity be slow. As is consistent with other things in life, so does one find that the nearer the top one attains in membership numbers so must the accumulation of new members be the more slow and tedious. It has been one of the ambitions of your Secretary to see the membership expand to the 2500 mark by this year, but various agencies have prevented that mark from being attained. At present our Society is composed of 2435 members, dues all paid, which membership is a very creditable showing when one realizes that each year there are less physicians to be found in the state. According to the 1925 edition of the Directory of the American Medical Association the total number of physicians in Iowa is 3378. Thus, less than a thousand Iowa physicians are not within the ranks of organized medicine.

House of Delegates

Last year your Secretary made a somewhat lengthy report concerning the lack of attendance at the meetings of the House of Delegates. Those of you who were present last year will recall the statement made that during the eight preceding sessions only eight counties had consistently been represented by their delegates, while five counties had not done the Society honor, since none of their delegates had seen fit to grace the legislative halls of this body with their presence during the same length of time. A very material change, however, occurred last year as far as attendance is concerned. Roll calls of the meetings showed the presence of 88 officers and delegates at the first, 87 officers and delegates at the second, and 73 officers and delegates at the third. Every constituent County Society had sent in the names of its delegate—a heretofore unknown happening—and four of the five counties blacklisted for lack of representation, were again placed in good favor since delegates were present to represent them. This year every County Society elected its delegate and forwarded the name of the same to the Secretary's office prior to this Annual Session.

Delegates to the American Medical Association

While on the subject of delegates, it may not be out of place to mention the importance of having the Iowa profession well represented in the national House of Delegates. Your Secretary feels that the selection of delegates and alternates to the House of Delegates of the American Medical Association is an extremely important duty of this House of Delegates, and one which, he feels at times, has been discharged without particular thought to the needs of the profession. For the past four years it has been my privilege to represent the Section on Nervous and Mental Diseases as its Section Delegate in the national House of Delegates. Therefore, I feel that I speak with the tongue of experience when I state that the only way Iowa medicine will ever have hope of recognition is by persistently sending as its representatives, delegates who not only can, but will, be present each year and take an active part in the activities of our national medical body. This state is now entitled to four delegates, owing to the re-apportionment of delegates in 1925, and I would earnestly urge this House of Delegates, through its nominating committee, to consider carefully its selection of delegates with an eye to the future and to retain those delegates, year after year, who consistently discharge their duties as delegates.

County Society Activities

This past year showed an increased activity in County Society work. Your Secretary had more demands made upon him for personal visits at County Society meetings than he was able to accept. It was his pleasure, however, to meet with Wright, Humboldt, Pocahontas, Hancock-Winnebago and Emmett County Societies last summer and to take an active part in their scientific programs. If it were possible for a Secretary to devote his entire time to the work of his office, I am sure he could employ practically all of it attending meetings in the various constituent County Societies. While the work of the various Councilors has been of good quality this past year, I would especially commend to this body the efforts of the Councilor of the 10th District, Doctor Watson W. Beam, for the untiring efforts he put forth in bringing his district well to the front.

Executive Secretary

At the Annual Session in 1924, the House of Delegates authorized the appropriation of a sum of money—not to exceed $4,000—to secure the services of some person to assist the Secretary; to act as Business Manager of the Journal; to aid the Field Activities Committee; and to perform such other duties as may be assigned. With the advice of the Editor, the Board of Trustees, and some other members of the Society, a selection was made which was apparently so satisfactory that the House of Delegates last year appropriated a similar sum of money for the same purpose. The Board of Trustees, at the request of the Secretary, fixed the Executive-Secretary's salary and made it $3,000 for the past year. During this year the Executive-Secretary personally visited sixteen County and District Societies, and made one visit to the home office in Chicago, during the Annual Meeting of the State Secretaries and Editors. There can be no question as to the necessity of an Executive-Secretary as the work of the past two years readily demonstrates, and I heartily recommend the continuance of this newly created position by a similar appropriation, the salary accompanying this office to be fixed as before by the Board of Trustees.

Periodic Health Examination Manual

At the Annual Conference of Secretaries of the Constituent State Societies held in Chicago, last November, the subject of the periodic health examination was presented and an actual clinical demonstration of the method of examining a patient was given for the benefit of the Conference by Doctor Chas. A. Elliott, of the Northwestern University Medical School. Believing that the Iowa profession would be interested in this step of constructive work undertaken and sponsored by the American Medical Association, the Board of Trustees, at the request of your Secretary, authorized the purchase of a sufficient number of copies of the manual, prepared by a committee for the American Medical Association, to supply each member of the Iowa State Medical Society. Accordingly, as the dues were received at the Secretary's office, a manual and membership card were sent in return to each member. So far thirteen state Societies have furnished their members, free of charge, with a copy of the manual, and while our society was the seventh to so act, it may be of interest to note that the Iowa order for 2600 copies was the largest one received outside of New York State with its 11,000 copy order and Indiana, the last state added to the list with its order, for 2700 copies for its membership. At present over 50,000 copies of the manual are in the hands of members of the medical profession and there is every reason to believe that the periodic health examination campaign is one of the big constructive pieces of work now being done by our national body and bids fair to yield vast returns in increased health and efficiency among the clientele of physicians through the nation.

Dues

The subject of dues is always of interest to members of any organization in which money is a necessity for maintenance, and since our Society cannot exist without sufficient funds the question of dues becomes paramount. In the early days when the Society only functioned about two or three days of the the 365 in a year, the necessity for financial means to meet the Society's requirements was almost at the zero point. Gradually as the constituent state societies began to function after the reorganization period of some twenty odd years ago, medicine in this country began to take a definite place as an organized unit with the result that the American Medical Association, the Constituent State Medical Societies, and the County Societies of the various Constituent State Medical Societies stand on a plane today heretofore unreached in the history of medicine in this country. With the development of organized medicine came new duties, new demands, on our own State Medical Society, with the result that the question now confronts us as to whether the activities of our Society shall be curtailed according to our present rate of income, or whether our Society shall keep pace with the better of our Sister State Associations by continuing to enlarge our activities through the increase of dues. This is a question which should call for the best efforts of this House of Delegates in arriving at a just conclusion, and while your Secretary feels that any recommendation dealing directly with the finances of this Society should come from the Board of Trustees, still he is willing to put himself on record as favoring any action to increase the dues sufficiently to maintain the integrity of organized medicine as it today exists in Iowa, and to lay aside a little financial aid each year until a definite reserve or sinking fund has been established.

FINANCIAL STATEMENT
IOWA STATE MEDICAL SOCIETY
May 1, 1925 to May 1, 1926

Income

Advertising	$ 7,961.93	
Reprints	1,810.01	
Subscriptions—Non-Members	81.93	
Sales	139.93	
Honorarium—Advertising Bureau, A. M. A.	265.30	
Dues	11,601.00	
		$21,859.52

Disbursements

Discount and Commission to Advertising Bureau	$ 1,048.55	
Check deducted a/c bank failure	5.00	
Check deducted a/c insufficient funds	4.25	
Paid to A. C. Page, Treasurer	20,801.72	
		$21,859.52

Other matters in which the office of Secretary has been active are reported to the House of Delegates from other sources.

Respectfully submitted,
Tom B. Throckmorton,
Secretary.

REPORT OF THE TREASURER

Dr. A. C. Page, Treasurer, read his annual report, which, upon motion duly seconded and carried, was accepted and referred to the Finance Committee.

Income and Investment Account

For the fiscal year ended April 30, 1926

INCOME		
Receipts from Secretary:		
Dues—1926		$10,416.00
Dues—1925		995.00
Dues—1924		5.00
Advertising—Net		7,354.43
Reprints		1,810.01
Subscriptions		81.35
Sales		28.53
Miscellaneous		111.40
Total Receipts from Secretary		$20,801.72
Profits on Sale of School Bonds		90.84
Interest on Investments:		
Savings Account	$ 103.95	
Liberty Bonds	786.25	
School Bonds	100.00	
Total Interest on Investments		990.20
TOTAL INCOME		$21,882.76
EXPENDITURES—Per Schedule No. 1		$28,876.98
NET LOSS—For the Fiscal Year Ended April 30, 1926		$6,994.22
TOTAL INVESTMENT—As at April 30, 1925		$36,355.45
TOTAL INVESTMENT—As at April 30, 1926		$29,361.23
Represented by the following:		
Liberty Bonds (face value $25,000.00)		$23,683.37
Iowa National Bank—Checking Account		$ 488.57
D. M. Savings Bank & Trust Co.—Savings Acct.		6,167.43
TOTAL		$29,361.23

REPORT OF THE COUNCIL

The report of the Council was presented by the individual Councilors of the various districts, with the exception of the third and sixth districts, their Councilors being absent. Upon motion by Dr. H. J. Prentiss, Iowa City, seconded and carried, the report of the Council was accepted.

Report of Councilor, First District

This district includes the following counties: Lee, Van Buren, Des Moines, Henry, Jefferson, Washington and Louisa. All of these counties were visited except Louisa. The Louisa County Society, I believe, has not met since last summer. The President of the State Society and the Executive Secretary attended meetings in Van Buren and Washington Counties, and the President also attended a meeting in Jefferson County.

Van Buren and Louisa Counties held only one regular meeting, I believe, last year. Most of the other counties hold two to four meetings a year. The Des Moines County Society meets monthly except during the summer.

For several years the medical men of the larger towns in Southeastern Iowa have arranged special programs during the year, to which the physicians in adjoining counties are invited—and many of them attend. Also the old Southeastern Iowa District Society, which was at one time a component part of the State Society, leads still a lively but independent existence and its meetings are nearly always well attended. So that the number of meetings of the County Societies alone is not an accurate index of the interest manifested in medical affairs in this district.

Respectfully submitted,
George B. Crow,
Councilor, First District.

Report of Councilor, Second District

The societies in this District have been active, have held good meetings with good programs and fair attendance.

Iowa County has not reported in answer to my inquiry, and not having visited this Society, I do not know just what their activities have been.

Scott County held ten meetings with a 50 per cent average attendance.

Johnson held five meetings with a 50 per cent average attendance.

Muscatine held four meetings with a 60 per cent average attendance.

Jackson held three meetings with a 40 per cent average attendance.

Clinton held several well attended meetings with good program. One of these included a social afternoon and golf tournament enjoyed by members of the neighboring county societies in Iowa and Illinois, as well as the local profession.

Scott County has 84 members, 21 physicians eligible, non-members. Johnson 57 members, 23 physicians eligible, non-members, not counting State Hos-

pital Internes. Muscatine has 26 members, 8 physicians eligible, non-members. Johnson has 22 members, 1 non-resident in U. S. Public Health Service and 2 physicians eligible, non-members.

Respectfully submitted,
D. N. Loose,
Councilor, Second District.

Report of Councilor, Fourth District

We have ten counties in the Fourth District; all of which have good working societies. We have about 180 members, 38 non-members, 47 irregulars. Twenty-five meetings were held during the past year all of which were well attended.

The Council met at Des Moines in February, 1926, and appointed Dr. Wm. Jepson of Sioux City delegate to the A. M. A. at Dallas and Dr. N. Schilling, New Hampton, as alternate.

About ten days before the A. M. A. meeting at Dallas our Secretary, Dr. Throckmorton, received the resignations of Drs. Voldeng and Harrison as delegate and alternate to the A. M. A. Dr. Throckmorton called up by long distance and as chairman of the Council we appointed Dr. Rockafellow of Des Moines as a delegate, and Dr. Spilman as alternate.

Respectfully submitted,
Paul E. Gardner,
Councilor, Fourth District.

Report of Councilor, Fifth District

The conditions of Society matters in the Fifth District do not differ materially from what they have been for the past several years.

These conditions are largely determined by the topography of the counties. Counties having a large town centrally located, with favorable railway connections usually have active and well attended societies; while the reverse is usually true of counties having only widely separated small towns, with little railway facilities. Especially has this been so the past year, when the country roads have been almost impassible much of the time for the past six months.

The following is the report of the secretaries of the seven counties composing the Fifth District, in answer to the following questionnaire: Present membership? Number of eligible physicians not members? Number of meetings during the year? Average attendance? Interest in Society work?

Jones County—Members, 11; non-members, 15; meetings, none; average attendance, none; interest, none.

Cedar County—Members, 9; non-members, 13; meetings 1; average attendance, 9; interest, not great.

Linn County—Members, 95; non-members, 43; meetings, 8; average attendance, 50; interest, good.

Benton County—Members, 17; non-members, 5; meetings, none; average attendance, none; interest, none.

Tama County—Members, 27; non-members, 1; meetings, 5; average attendance, 14; interest, good.

Marshall County—Members, 40; non-members, 6; meetings, 10; average attendance, 32; interest, very good.

Grundy County—Members, 11; non-members, 3; meetings, 2; average attendance, 10; interest, not strong.

Marshall County has the best record for percentage of attendance and number of meetings. Tama County has the largest percentage of physicians which are members, namely: 27 members, and only 1 non-member. Linn County Society sends out invitations to adjoining counties, and when conditions are favorable has a very large attendance. Two counties, Jones and Benton, held no meeting the past year. But all the counties keep up their organizations. And when we get good roads, the Societies will be improved, like everything else.

Two members died during the past year: Dr. C. T. Brown of Cedar Rapids, member of the Linn County Medical Society, died suddenly of an apoplectic stroke, while making his rounds at St. Luke's Hospital, on September 3, 1925. Dr. J. A. Pinkerton of Traer, member of the Tama County Medical Society, died suddenly of heart disease at Iowa City, on April 14, 1926, while attending the Annual Clinic at the University.

Respectfully submitted,
G. E. Crawford,
Councilor, Fifth District.

Report of Councilor, Seventh District

General conditions in the Seventh District are gradually improving. During the past year I have visited all the component societies but two, a combination of inclement weather and bad roads prevented me from reaching their meetings.

All the societies in this District are organized and are functioning. Three of the societies do not meet as often as they should, but their meetings when held are well attended and they have an admirable habit of requiring each man present to discuss every paper presented. This adds for every member a personal interest in the programs and a personal interest in the program means an increased interest in the society and increased interest in the society can only mean its sure and steady growth.

There is also an increasing custom of eating dinner together either before or after the program, and this I have tried to encourage, believing with Thomas that "A full stomach wipeth away many an imagined ill".

The comparative position of the country doctor is improving both financially and scientifically. The towns that formerly had three or four doctors now have two. Those that had but one now in many cases have none and depend on the more fortunate larger cities. This fact, with the means of better transportation, has greatly increased individual practices and at the same time shortened the hours consumed. Now the doctor is not going to be greatly improved by legislation, only slightly so by uplift movements, the Councilor isn't doing much and the

State Society is rather far removed from each individual one of us. However, this added time and the better financial condition does allow more study, better attendance on medical meetings, both local and national, and many men practicing even in the smaller towns have had the benefit of post-graduate courses.

During this past year I have paid some attention to the observance of the laws that affect the physician, particularly the Harrison Narcotic law. To my knowledge there is no dope peddler among the profession in this District. There is, however, an appalling laxity in the keeping of the proper narcotic record. While the spirit of the law is not being broken the letter of it is so widely abused that I believe fully 50 per cent of the men practicing are liable to either fine or worse should the government see fit to examine the individual records.

I would suggest to the Editor of the Journal that this law with the latest rulings be again printed, calling attention especially to the steps that must be taken with each dose or prescription of narcotic used.

In this District not enough men are availing themselves of the benefits of the State Laboratories and also the State Hospital at Iowa City. Opposition to the Sheppard-Towner law has apparently disappeared.

Respectfully submitted,
Channing G. Smith,
Councilor, Seventh District.

Report of Councilor, Eighth District

The Eighth District consists of eleven counties: Appanoose, Wayne, Lucas, Ringgold, Decatur, Page, Fremont, Union, Adams, Clarke and Taylor. It is about one hundred and fifty miles from the east to the west side of the District which makes it difficult to meet with the different societies. At the beginning of the year I wrote to the different Secretaries asking them to notify me of the time and place of their meeting. All of them responded but four.

Clarke County has a membership of seven doctors with two meetings.

Adams County, six doctors with two meetings.

Ringgold County, six doctors with one meeting.

Decatur County, thirteen doctors with two meetings.

Wayne County, sixteen doctors and three meetings.

Page County, has one hundred per cent membership.

I cannot give the number of doctors in Lucas or Appanoose Counties.

Taylor County, has a very good Society that meets once a month and they generally use local talent.

I consider this District improved over last year. The Southwestern Medical Society and other District Societies detract somewhat from the local Societies but as they generally give a good meeting it is certainly a benefit to the membership.

In Union County, they have one meeting a year, at which time they elect officers and delegates for the ensuing year.

Respectfully submitted,
Fred A. Bowman,
Councilor, Eighth District.

Report of Councilor, Ninth District

There are nine counties in the Ninth District, and there is a Society in each county, and with one or two exceptions they are all fairly active. I have visited every society in the district with the exception of the Adair County Society. This Society I have been unable to visit. They have few meetings and it seems to be a society in name only. One Society, Guthrie County, is combined with Dallas County, and this Society is reported on by the councilor from the Dallas District.

We tried during the year to have a meeting in Council Bluffs of all the societies of the district. Had a good program and a fair attendance only from the outside counties. On the whole, the conditions in the district are good. As far as I can tell there seems to be no friction or petty jealousies in those societies which are meeting only semi-occasionally, which would be a factor in their lack of enthusiasm.

Respectfully submitted,
H. B. Jennings,
Councilor, Ninth District.

Report of Councilor, Tenth District

The various county medical societies in the tenth district, which consists of thirteen county medical societies, twelve are active and in good condition. The district has fourteen counties with only thirteen county medical societies, this is so because we have one hyphenated society—Hancock-Winnebago are joined together as one. This society has fourteen paid up members, in fact all the physicians in the two counties that are eligible are members in good standing. I met with this society last September, when almost a full membership was present and much interest was shown by all. They hold frequent meetings and are usually represented at the State Meeting.

Kossuth Medical Society is also an active society. Have seventeen members, and always heard from at State Society.

Emmett County Medical Society,—for many years they were very inactive, did not hold any meetings at all, and have been represented at the State Society but once since 1916.

Last September, with Doctor Throckmorton's assistance, we had a very good meeting with most of the doctors in the county present and several from adjoining county societies and since that time they have held meetings, and elected new officers. We expect in the future Emmett to be on the map and always represented here.

Their membership is nine paid up, and two that are eligible but not members of county society.

Palo Alto County Medical Society has fourteen members in good standing and no physicians of good standing in the county who are not members. They have been represented at State Society five times since 1916. Hope they will always be represented in the future.

Pocahontas County Medical Society is also an active society, holding meetings twice a month most the year round. We have sixteen members in good standing, who all work together and participate with papers. We have four doctors in the county who are eligible but not members which we hope to soon have interested with us.

I am unable to make a favorable report on Humboldt County Medical Society I am sorry to say, as the county is very small with few doctors with several towns close to the lines of the adjoining counties. Some few of Humboldt County physicians joined and affiliated with adjoining County Medical Societies so that it has been very hard to maintain a county society at all. We had a meeting with the most of the members present and made an effort to get more interest worked up and we all rather expected that they would be able to hold meetings, but since then I think they have not been able to get a quorum. And now I think they are willing to surrender their charter. I am sure at this time they should do so. Their Society has not been represented at the State Society but once since 1916 and that was in 1925. Then I called officers up and had Dr. Shipley of Ottosen furnished with proper credentials, and he was present. Since then the Doctor has associated himself with Kossuth County Medical Society.

I would recommend to the State Medical Society that their charter be taken at this Annual Meeting.

Calhoun County Medical Society has a membership of nineteen and only two physicians in the county that are eligible who are not members.

Calhoun County Medical Society is very active and ought to be especially mentioned for the good work they are doing along lines of lay education and instruction. They are far in advance of any County Medical Society in the state, and are carrying out the recommendations of the American Medical Association in a splendid manner.

Webster County Medical Society is very active, has a membership consisting of forty-three live physicians and only six eligible in the county who are non-affiliated. They hold weekly meetings and much enthusiasm shown and always represented at State Society.

Hamilton County Medical Society is not in a very active condition, having only seven paid members, and seventeen non-affiliated physicians in the county who are eligible. But we hope soon to see these figures reversed and they holding more frequent meetings.

Crawford County Medical Society has thirteen active members and no eligible physicians in the county not members, and they have been fairly well represented at the State Meetings.

Carroll County Medical Society has twenty-four active paid up members and only two eligible physicians in the county not members. This society is showing much more interest and the conditions are all very much improved.

Greene County Medical Society—the percentage of membership is very low, but local causes may have much to do with that at this time, which we hope will soon be overcome. They have only ten active members and eight eligible physicians in the county not affiliating with the Society.

Boone County Medical Society has twenty-one members who are very active and only three physicians in the county who are eligible and not members. This Society is in a very healthy condition.

I feel like congratulating the county secretaries of the thirteen County Medical Societies on work done well by sending in their reports.

I have every reason to think that as interest in medical affairs go the condition in the Tenth District is very good, but hope to see improvement in some of our county societies in 1926.

Respectfully submitted,

W. W. Beam,

Councilor, Tenth District.

Report of Councilor, Eleventh District

The general condition of the physicians of the Eleventh District is satisfactory. Our District Societies are alert, well attended and helpful.

Outside of Sioux City the number of physicians is steadily decreasing. We now have 242 as against 254 ten years ago and 275 fifteen years ago. The ratio of population to physicians is steadily increasing. In 1910 it was one physician to 751 of population; In 1915 it was one to 895; in 1925 one to 946.

Our physicians are all growing older. The average age ten years ago was forty-four, today it is forty-eight. This is due to the fact that few young men are locating in the country and the older men are staying in the harness. The hospital facilities in Sioux City have been improved and the paved and graveled roads assist an ever increasing number of cases to be taken there for care and treatment. There is a growing feeling amongst our physicians that personal service and devotion of time to the interest of the patient are the factors that hold public confidence. This service is being more generally given, better records kept, more thorough examinations made and less treatment from bottle lables given. My directory of the Eleventh District has been published in the Iowa Journal and is helping to broaden our acquaintance.

Respectfully submitted,

G. C. Moorehead,

Councilor, Eleventh District.

The report of the Board of Trustees was presented by Dr. O. J. Fay, Chairman of that body, who at the conclusion presented his resignation to take effect at the close of this Annual Session. Dr. V. L. Treynor, Council Bluffs, moved that the report alone be accepted, which upon being seconded, was accepted and placed on file.

REPORT OF THE BOARD OF TRUSTEES

Conforming to long-established custom, I can make the official report of the Board of Trustees in but few words: We have audited the books of your Secretary and Treasurer, and have found them correct. The details of these reports will be given you by these officers in person.

But I am minded to add to this stereotyped, official report, an unofficial and informal report on the Society's affairs viewed from the vantage point of the sidelines, the position to which your Board of Trustees is assigned under the present organization of the Society.

The financial statement as presented by the Executive Secretary will indicate a deficit in current income over current expenses of some $7,084.67. The estimated budget for the coming year exceeds the estimated income by some $6,000 and provisions to care for this larger budget should and must be made if the activities of the Society are not to be badly crippled. While any deficit is to be regretted, an increased membership fee to provide not only for carrying on the present work but also to provide for a wider field of endeavor to meet new needs should prove of real advantage. A dozen of our state medical societies have annual dues which range from almost double to quadruple those of our society. In some of the special medical societies of national scope, the dues are again several times those of our society, and just these societies seem to enjoy a particularly active growth. Going outside the ranks of legitimate medicine, we find that the chiropractors assess themselves $100 in annual dues, and we are all too familiar with the active aggressive work of their organization. We must admire their zeal though we cannot but deprecate its object, and we might do well to take a leaf from their notebook insofar as their devotion to the advancement of their profession is concerned. Few of us would feel justified in taking so drastic a step as to increase our dues to anything like this extent, even though it is quite within the realm of possibility that such an increase would prove an excellent investment. Some increase should, however, be made, to take care of the anticipated deficit, and to leave a small margin of safety for such other unforeseen expenses as may be incurred during the year.

The necessity for raising additional funds to meet worth-while, forward-looking needs should not be considered a hardship, but a privilege, not an extravagance but a sound business investment, provided always that the funds which are so raised are expended as you would have them expended. This is an issue that rests squarely with you. Thus one of the chief items of expense—amounting in the past year to practically $3 per member, or 60 per cent of the annual dues—has been the cost of medico-legal defense. The sum is not in itself excessive if the protection afforded is considered proportionate to it, but under existing arrangements, the Society offers only legal counsel while the defendant physician must himself meet the cost of any adverse judgment, or go to the additional expense of carrying professional insurance to protect himself against such an eventuality. To ascertain the sentiment of the membership in regard to medico-legal defense, the Board of Trustees asked that a questionnaire be sent the members ascertaining their views in regard to it. The results of the poll taken are not conclusive, though the fact that 64 per cent of those answering the questionnaire either carry professional insurance with some surety company, or ask that the society afford them this protection is at least suggestive. If our members must carry additional insurance, we may well question whether the relatively large sum now spent on legal defense alone is justified, since the company which must indemnify a physician against an adverse judgment, must in its own interests provide adequate legal defense for him. We are then paying twice for legal counsel.

Whatever our judgment in regard to insurance, we could ill afford to dispense with the services of our Medico-legal Committee, standing as it does for organized defense within an organized society. This Committee, which has rendered such excellent service in the past, should continue to represent the profession and to pass upon the cases brought before it from the standpoint of the profession; there can be no question of the value of such defense, whatever other measures of defense we may desire. But I would suggest that the Medico-legal Committee be asked to look into the question of group insurance, its cost and its feasibility, and to report the results of their investigation at the next annual meeting. In the meantime, arrangements should be made to put the expense for legal services on some definite basis, a basis which would guard against a doubling of expense, as has been witnessed in the past four years.

I would here point out that the Board of Trustees is in no wise responsible for the expenditures of your Society, for under the present by-laws, the Board has no control whatsoever over the funds of your Society, is in fact nothing more than an auditing committee, the sole function of which is to pass upon bills which have already been made, or at least contracted for, and payment of which can hardly be refused. An auditing committee is provided for elsewhere in the by-laws, and there is no apparent reason for duplicating their work. There is, on the other hand, real need for an executive body to have general charge of the business affairs of the Society. No corporation with comparable resources, or with a fraction of the potential power of the Iowa State Medical Society would think of attempting to carry on without a Board of Directors. But this Society, in the twelve months that elapse between the annual meetings of the House of Delegates is, to all intents and purposes without an executive board. The secretary or any committee is accordingly faced with the alternative of being handicapped in the execution of necessary work because there is no one to whom to apply for authorization of needed expenses, or of meeting these expenses from the private pocket

of some member, or as is probably often the case, of being placed in the embarrassing position of incurring expenses, large or small, without proper authorization, in the hope that once the bill has been incurred it will be paid without question. In name, and in name only, the Board of Trustees is custodian of the property of the Society; as matters now stand, the Trustees are placed in the unenviable position of being practically forced to stand sponsor for all unauthorized bills, once they are incurred, though they have had no voice in the matter of their being contracted. I believe that the best interests of the Society would be served by making the Board of Trustees custodians in fact as well as in name, by so amending the by-laws as to delegate active administrative powers as well as passive auditing duties to them; by making the Trustees answerable for the expenditures of the Society as well as for the perfunctory auditing of bills when the money has already been spent.

Such a change in the duties of the Board of Trustees would necessitate frequent, probably monthly meetings of the members, and would thus provide an executive body always available for the conduct of the Society's business. The House of Delegates is too large a body, and convenes at too long intervals to make its active supervision of the affairs of the Society practicable. The secretary of the Society is accordingly the one available executive officer in the long intervals between the sessions of the House of Delegates. This necessitates placing a greater burden upon him than the Society is justified in placing upon the shoulders of any one member, both because it is obviously unfair to that man, and because with any change in the office of secretary, a host of duties, calling for more or less special knowledge, would at once devolve upon someone who had had no opportunity of familiarizing himself with them. The Board of Trustees, on the other hand, with only one new member each year, would provide a mobile executive body, available at all times, and would at the same time be a perpetual body, never handicapped by the necessity of facing a multitude of new and unfamiliar duties.

Such a governing body would, moreover, make possible the coordination of many society activities, a coordination which cannot now be achieved. Thus, under the present arrangements, the editor of the Journal is elected by the House of Delegates, a body which cannot possibly co-operate with him in the work of publishing the Journal, and to the secretary of the Society is entrusted the appointment of an executive secretary to assist the editor and the secretary in their work. A far more practical method of filling these positions would be to entrust the selection of both editor and managing director—offices which might or might not be held by the same person, depending upon the needs and growth of the Society—to one and the same body. The by-laws of the Society should be so amended that the duty of selecting a managing director and editor would devolve upon the Board of Trustees, who should be made responsible for the work of the managing director and editor and the conduct of the Journal.

I would not have anyone infer that these changes are recommended as a bid for greater power for the present Board of Trustees. To avoid any such misconstruction, I wish to point out that one new member of the Board is to be elected this year, and that my own resignation, which I shall tender the House of Delegates today, makes possible the selection of a second trustee, or a majority of the Board.

I believe that it would be eminently desirable to have a greater number of members take an active part in the work of the Society, that greater activity and efficiency would be attained by placing the responsibility for the work of the Society upon the shoulders of a larger number of men. In order to achieve this desirable end, it should be provided that no member serve upon more than one committee unless such committee membership is held ex-officio by an officer of the Society. While it is true that the man who is a desirable and efficient member of one committee is usually equally desirable and efficient in the work of other committees, and that his experience is of service there, such multiple membership tends to deprive the Society of the active participation in its affairs of a larger number of active, interested men. Since there are less than fifty offices and committee memberships in the gift of the Society and a membership of some 2500, it follows that much latent ability will remain undeveloped, if the number of committee members is further decreased by having a single member serve on two or more committees.

In still another field, passive participation in the affairs of the Society might well be made active participation by a change in the by-laws. The distribution of the Councilors throughout the state and their consequent knowledge of local medical conditions should make them particularly valuable in the work of the State Society, but under existing conditions they have little active part in society affairs. The transference of the duties of the Field Activities Committee to the Councilors should make possible much more effective work, and should bring that work under the control of the Society proper, where it primarily belongs.

I have prepared, and have asked Dr. Treynor to present for your consideration, the amendments to the by-laws which would make the suggested changes effective. I have also had copies of these amendments struck off for each member of the House of Delegates. As they appear here they seem rather bulky and formidable, but this is because for the sake of clarity and unity, I have included those parts or sections of the by-laws bearing on the situation, even where slight changes or no changes at all have been made. Briefly, the real changes are made in Section 5 of Chapter VI, the chapter which out-

lines the duties of the trustees. The other changes will be found to be secondary to these.

Respectfully submitted,
Oliver J. Fay, Chairman,
William B. Small,
Michael J. Kenefick.

The report of the Delegates to the American Medical Association was presented by Dr. B. L. Eiker, Leon. Owing to the fact that the Dallas Session of the American Medical Association was held prior to the Annual Session of the Iowa State Medical Society, both the Atlantic City and Dallas Sessions were reported upon at this time. Motion was made by Secretary Throckmorton that the reports be accepted and placed on file. Seconded and carried.

REPORT OF THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

Atlantic City Session

Your delegates representing the Iowa State Medical Society, in the House of Delegates of the American Medical Association at its annual meeting held in Atlantic City, New Jersey, May 25-29, 1925, inclusive, beg leave to submit the following report:

The House of Delegates of the American Medical Association this year had an attendance of 130 members, the usual large volume of business was transacted, of which the following is a synopsis.

The Speaker of the House in his annual address emphasized the need of medical publicity, and approved of efforts being made to acquaint the general public with medical matters and the benefits to be derived therefrom.

The President, Dr. Pusey, called attention to the inadequate time allowed the House of Delegates to familiarize themselves with the business to be transacted, and suggested that the state societies elect their delegates one year in advance as they now elect their presidents.

The President-Elect, Dr. Haggard, made special mention of the benefit to be derived from constant legislative activities, both state and national, by the profession.

The House was honored by an address from Dr. J. B. Hall, President of the British Medical Association. In this address he briefly stated their medical problems, and your delegation feels that his remarks are worth the careful consideration of every American physician.

The reports of the various departments of the Association then followed, and were referred to the appropriate committees for final action.

Some of the resolutions passed by the House and thought to be of interest to this body are hereto appended.

The principles of medical ethics of the American Medical Association were amended and extended so as to include the penalties of censure, suspension, or expulsion, to be determined by the state and county societies under whose jurisdiction the offense occurs.

This was the year for reapportionment of the number of delegates from the various organizations to the American Medical Association, and was fixed at one delegate for every 750 members or fraction thereof. This gives Iowa four delegates.

The Committee on Medical Education reported that the number of medical students in the United States was increasing at the rate of about 1000 per year, regardless of the high entrance requirements. They recommended a readjustment of the time required for elementary and secondary education, thus allowing a student to reach his medical course earlier in life than heretofore. They also recommend that the medical course be so arranged that the student may be permitted to pursue his studies continuously, in other words a school year of four quarters.

Relative to the nursing problem the committee asked that a careful survey be made to ascertain the exact conditions before recommendation looking to relief be submitted.

The Committee on Public Relations and Legislation, recommended that a full time man be maintained at Washington for the purpose of giving advice relative to legislation pertaining to the medical profession and to safeguard public health and medical interests. Also that the proper authorities at Washington be asked to consider traveling expenses to medical meetings and expenses incurred in postgraduate work, as legitimate deductions to be made from computing income tax. They further recommended that the Harrison Narcotic Law and the Volstead act be so amended in their operation as to reduce the three dollar annual tax now imposed upon physicians and to allow them to prescribe more than one pint of spirituous liquors for one patient in ten days.

The House of Delegates went on record approving the movement suggested by the President that each state have an organization for team work to meet the medical needs of the people in time of disaster.

The House further approved a periodic health examination, emphatically stating that said examination be conducted by the family physician.

They also expressed their approval of changing the constitution so that medical meetings might be held with, and if necessary in, the Dominion of Canada.

The Board of Trustees were asked to appoint a council on non-medicinal agents for testing the therapeutic value of electrical devices, lamps, lights, etc., now offered to the profession.

The House concurred in a resolution adopted by the section on ophthalmology requiring certain physical and mental standards for drivers of motor vehicles. A resolution introduced by Dr. Macrae of Iowa condemning as a disgrace to legitimate and scientific surgery the inadequate short courses claiming for a certain sum of money to qualify inexperienced men to perform major surgery, was approved by the House of Delegates.

President Haggard called the attention of the profession to the necessity of "Doing as you would like to be done by" to your fellow practitioners in cases of dissatisfied patients where malpractice suits are liable to arise.

Wendell C. Phillips of New York was chosen President-Elect, and Dallas, Texas, recommended as the next meeting place.

Respectfully submitted,
Donald Macrae, Jr.,
M. N. Voldeng,
B. L. Eiker.

Dallas Session

Your delegation selected to represent the Iowa State Medical Society in the House of Delegates of the American Medical Association, which convened in Dallas, Texas, April 19 to 23 inclusive, 1926, beg leave to submit the following report:

Iowa is entitled this year to four delegates, instead of three as formerly. All four delegates were present and attended every session of the House of Delegates of the American Medical Association. The Speaker of the House in his annual address suggested that the annual meeting place be determined by the Trustees instead of by the House of Delegates. The final action on this suggestion provided that the Trustees select three suitable places from the list of cities asking for the meeting, and allow the House of Delegates to select one of the three thus submitted. President Haggard in his address to the House of Delegates laid special stress on periodic health examination. President-Elect Phillips urged the doctors to give more time and attention to the effort of stamping out infectious and contagious diseases. The report of the Trustees showed a very satisfactory year, both as to scientific achievements and financial developments, the report of the Secretary showing a slight increase in membership. An amendment to the Constitution and By-Laws to enable this Association to hold meetings in Canada was rejected by the House. The House endorsed the principle that in civil and criminal cases the court should have the power to appoint expert medical witnesses, it condemned the approval of certain chiropractic schools by the United States Department of Labor, and refused to express an opinion, without further information, on a bill providing for distributing through the mails information pertaining to birth control. An attempt was made to create a means whereby medical men apparently reputable and eligible to membership in the American Medical Association, but were refused such membership in their county societies, because of local personal trouble, might be admitted to membership in the American Medical Association through the state organization; this proposal the House rejected. The recommendation was made that medical schools so change their curriculum as to permit students to receive credit for continuous time spent in study, and remove the present limit of nine months to the school year. The liquor question, always a fertile source for vigorous debate, was this year turned over to the Trustees to handle in such way as in their judgment seemed wise and prudent. Some of the distinguished visitors in the House of Delegates were former Speaker Work, now Secretary of the Interior, and the Delegation sent from the Republic of Mexico. The action of the House of Delegates was characterized at this meeting by harmony, deliberation in committee work, and rapid dispatch of business. The officers for the ensuing year were as follows: J. N. Jackson, President; J. O. McReynolds, Vice-President; Olin West, Secretary; F. C. Warnshuis, Speaker; A. H. Bunce, Vice-Speaker, and J. A. Pettit of Oregon, C. W. Richardson of Washington, D. C., J. H. J. Upham of Ohio, and Rock Sleyster of Wisconsin were elected Trustees. Washington, D. C. was selected as the next meeting place, the time to be fixed by the Trustees.

Respectfully submitted,
Donald Macrae, Jr.,
S. A. Spilman,
Wm. Jepson,
B. L. Eiker.

Under the heading of Standing Committees, Dr. D. S. Fairchild, Chairman, presented the report of the Medico-Legal Committee, which upon motion duly seconded and carried, was accepted.

REPORT OF THE MEDICO-LEGAL COMMITTEE

Report on the Medico-Legal Service, Iowa State Medical Society

Commencing 1908-09, Extending and Including 1925-26

There are, of course, different methods of measuring the value of activities, but the one best understood is the money standard, and we must therefore bring this standard to bear in presenting the work of the Committee on Medical Defense. In our state courts the judge generally permits the attorneys to bring in many questions that are not material to the case and much time is wasted in discussing the admission of evidence and on various motions, so that when a case is commenced we cannot tell how many days it will last, hence a considerable bill of expense is made up in a relatively unimportant case.

There is one question in malpractice cases that is difficult to measure. It is generally conceded that when a jury of twelve men bring in a verdict of guilty, that it has a harmful effect on the doctor's reputation, particularly if he is young and but recently located. If the jury disagree, or the judge directs a verdict in favor of the defendant doctor, it is a partial victory, and if the jury finds in favor of the doctor, it is a victory which may add to the doctor's reputation. Not only is the doctor exposed to the hazard of a money loss, and a loss of reputation, but he is exposed to a considerable degree of worry and anxiety. It was the founder's idea—Dr. D. C.

Brockman—that if the defendant doctor had an experienced, capable and sympathetic committee to take charge of his case and select a specially trained attorney, that his interests would be safeguarded in a way that would give comfort to the anxious doctor.

These are questions that cannot be measured by dollars. Insurance against fire and life insurance are forms of insurance in which money values are involved; not so in malpractice, except in so far as the disposed of judgments and the adjustments of compromises are concerned. The verdict of guilty is a lasting reflection and a humiliation that cannot be measured by money, it is not merely a commercial question, as is often said.

The first report of the Committee on Medical Defense was presented as covering 1908-1909, from April 1, 1908 to April 1, 1909. The Committee, comprised Drs. J. M. Emmert, L. W. Littig and D. S. Fairchild, began to function in 1907, but no report was made until 1908-1909. For the convenience of the State Medical Society, we are presenting a statement of expenses from year to year. If there are in some years a considerable number of cases filed, or a considerable number tried or adjusted, the fault cannot lay with the Committee; whose fault it may be we are not prepared to say. It must be recognized, however, that the practice of medicine has changed. We may well ask ourselves if the practice of medicine has become mainly a commercial enterprise, or are some of the old ethical standards still alive. If the practice is a commercial undertaking, the protection against claims for malpractice may be purely commercial, as in automobile insurance. If, however, the practice of medicine has an ethical, sentimental or human side, there should be a spirit of fairness and justice that cannot be measured by dollars and cents. Of course, measured by commercial standards, the cheapest method is the best. It may be asserted that commercial insurance companies are organized for the particular good of doctors, but it may be safely said that the primary object are profits and the method that will bring the greatest profits will be the favored method. We would have no faith in a company that claimed otherwise.

The Committee on Medical Defense of the State Medical Society is not a competitor in the business of protecting doctors against malpractice, and therefore consider only methods of protecting, not only the good name of individual physicians, but the good name of the entire profession, as well as his financial interests, and the Committee's methods are not influenced by profits to stockholders.

The thirty-two states which are maintaining medical defense within their own ranks, utilize in one way or another the advantages of commercial insurance. Insurance as a business is rather complicated and needs capital and skilled operators, and if taken up by a State Society, would fail. In view of the fact that there are a few cases in which the circumstances and conditions are such that a verdict is liable to go against the doctor, he should purchase indemnity of a company which has it to sell, or there are cases of such a nature and character that an adjustment should be made out of court, and here, again, indemnity insurance is an element of safety.

The question then for the profession to consider is, is there an advantage in these joint agencies, the one in and controlled by the State Society, and the other commercial and controlled by a business corporation. The contract for a commercial insurance must be a private matter wholly in the hands of the individual doctor and not to be influenced by the State Society. It should not for a moment be thought that there is a conflict of interest between the Committee and the insurance company. Each pays his own attorney, but they join in a mutual effort to secure justice for the insured. The attorney for the State Society bears the burden of the insurance company only in so far as he protects the defendant doctor against a judgment in conjunction with the attorney of the insurance company.

We are placing in parallel columns, Cases Sued, Cases Disposed, Dutcher's Bill, Bill for Local Attorney, Total Cost.

Cases commenced since organization of department	266
Cases commenced prior to the report of 1909	15
Cases commenced during 1909-1910	13
Cases commenced during 1910-1911	10
Cases commenced during 1911-1912	14
Cases commenced during 1912-1913	13
Cases commenced during 1913-1914	10
Cases commenced during 1914-1915	24
Cases commenced during 1915-1916	19
Cases commenced during 1916-1917	17
Cases commenced during 1917-1918	13
Cases commenced during 1918-1919	14
Cases commenced during 1919-1920	7
Cases commenced during 1920-1921	12
Cases commenced during 1921-1922	13
Cases commenced during 1922-1923	16
Cases commenced during 1923-1924	14
Cases commenced during 1924-1925	20
Cases commenced during 1925-1926	15
Cases pending at date of 1909 report	7
Cases pending at date of 1910 report	10
Cases pending at date of 1911 report	14
Cases pending at date of 1912 report	25
Cases pending at date of 1913 report	26
Cases pending at date of 1914 report	21
Cases pending at date of 1915 report	28
Cases pending at date of 1916 report	33
Cases pending at date of 1917 report	33
Cases pending at date of 1918 report	29
Cases pending at date of 1919 report	29
Cases pending at date of 1920 report	26
Cases pending at date of 1921 report	30
Cases pending at date of 1922 report	26
Cases pending at date of 1923 report	33
Cases pending at date of 1924 report	37
Cases pending at date of 1925 report	38
Cases now pending	36
Total cases disposed of	230

Year	Local Attys.	C. M. Dutcher	Total
1908-09	$ 140.22	$ 795.18	$ 935.40
1909-10	392.25	1,991.86	2,384.11
1910-11	25.00	2,107.19	2,132.19
1911-12	360.00	4,239.65	4,599.65
1912-13	625.00	2,730.54	3,355.54
1913-14	508.45	2,587.27	3,095.72
1914-15	475.00	4,554.54	5,029.54

Year	Local Attys.	C. M. Dutcher	Total
1915-16	940.51	2,770.13	3,710.64
1916-17	160.00	2,182.31	2,342.31
1917-18	775.75	2,706.09	3,181.84
1918-19	875.00	1,189.19	2,064.19
1919-20	275.00	1,970.58	1,970.58
1920-21	125.00	2,627.03	2,627.03
1921-22	1,020.93	4,914.94	4,914.94
1922-23	394.55	2,895.21	2,895.21
1923-24	226.00	3,718.68	3,718.68
1924-25	1,273.96	5,945.52	5,945.52
1925-26	703.25	4,744.92	5,448.17
	$ 9,195.87	$54,670.83	$60,351.26

Malpractice Cases Pending at the Date of Last Report and Since Disposed of

G. H., a minor, by Geo. H., her next friend vs. Dr. R. W. P.:

This action was commenced for the March Term, 1925, in the District Court of Woodbury County. Damages are claimed in the amount of $3,100 for negligence in the operation of minor for the removal of tonsils and adenoids. The plaintiff claims that a sponge made of gauze was left in patient's throat. We went to Sioux City to try the case and settled it for $200. The facts were quite involved, and Dr. P. as well as ourselves felt that it should be settled.

H. G. vs. Drs. H., S., M. and K.:

This action was begun in the District Court of Scott County, and damages were asked in the amount of $30,000 for negligencc in the treatment of a fractured femur. The case was assigned for trial on April 13, and we finished the trial of the case May 1st. It was the longest battle that we have had. The result is the case was very bad. There was a shortening of three and three-fourths inches in the femur and while the accident occurred on February 24, 1922, the plaintiff was still on crutches at the time of the trial. The defendants treated the case by the application of the Lane plate and the wound became infected. The plate had to be removed and intra nodular bone splint was applied and finally the plaintiff secured a union, but there is still a fistula at the seat of the fracture. The plaintiff contends negligence in the use of the Lane plate and also had many other grounds of negligence. The court refused to direct a verdict for the defendant at the close of the plaintiff's testimony, but at the close of all of the testimony, the court directed a verdict for the defendants. The plaintiff filed a motion for new trial which was overruled. Time for appeal has expired and the case is finally disposed of.

L. J., Admx. of the Estate of G. R. J., Deceased vs. Dr. H. L. B.:

Notice was served on the defendant in this case for the November Term, 1924, of the District Court of Lee County, at Keokuk, advising the defendant that a petition would be filed on or before November 5, 1924. Pursuant to said notice, plaintiff filed a petition in the District Court of Johnson County, Iowa, claiming damages in the sum of $25,000 for alleged negligence in operation for tubercular infection of the lymph gland of the neck resulting in death, on the 22nd day of August, 1923. In view of the fact that the petition was filed in Johnson County and the notice advised defendant to appear in Lee County, we have entirely ignored the petition in Johnson County, as the District Court of Johnson County has no jurisdiction of the defendant, and no petition was ever filed in Lee County. The statute of limitations has run and the case may be considered finally disposed of.

A. K., Admx. of the Estate of C. K., Deceased vs. Dr. B. R. H.:

We tried one case for Dr. H. a short time before this was commenced, which resulted in a verdict of $500 against him, but we settled for $400. Dr. H. did not have the support of the profession in Polk County, and we finally settled the case for $800. The defendant had indemnity in the Medical Protective Company, which company paid this amount.

G. K. M. vs. The Atlantic Hospital, Dr. R. A. B., L. M. and L. M. as Admx. of the Estate of K. F. M., Deceased:

This action was brought for the July, 1924, Term of the District Court of the United States, at Council Bluffs, Iowa. Damages were claimed in the sum of $50,000 for negligence and unskilled treatment of K. F. M., now deceased. The administratrix of the deceased's estate refused to bring action and this action was commenced by an heir, making the administratrix and the other heirs parties defendant, together with the doctor and the Hospital. All of the defendants, except Dr. F. J. B. had counsel other than myself. A demurrer was filed and argued, raising the question that such an action could only be maintained by the administratrix, but the court overruled the demurrer. The question then was raised that the Federal Court had no jurisdiction because there was not the dicersity of citizenship required, and the court sustained that contention and dismissed the case. The statute of limitations has run and the case is finally disposed of.

Mr. and Mrs. S. C. vs. Dr. E. W. Z. and Dr. E. F. B.:

This action was brought for the February Term, 1925, for the District Court of Webster County. Damages are claimed in the sum of $15,000 for alleged negligence of the doctors in leaving a sponge in the vaginal vault after an operation. We have made no personal investigation of the case at the time of the last report. This case was settled for a nominal amount and is disposed of. These defendants had indemnity in the Medical Protective Company, which company made the settlement.

A. H. vs. Dr. C. W. B.:

This action was brought for the September Term, 1924, of the District Court of Polk County. Damages to the amount of $2000 are claimed for alleged negligence in treating an injury to the right wrist of the plaintiff. It is claimed that the plaintiff severed all of the cords of the wrist and that the defendant

failed to properly suture the same. We have had conferences with the doctor and with the doctor who treated the plaintiff subsequently. Have made an offer of $200 to settle the same, which had not been accepted. The case was called for trial in Des Moines early in June, 1925, but Dr. B. was very reluctant to go into Court with the case, as the case was finally disposed of and settled by the payment of $154.70.

Mrs. S. M. vs. Dr. H. A. H.:

This was an action brought in the District Court of Polk County. Notice was served by plaintiff but no petition filed, but the correspondence and interviews disclosed that damages were asked for failure to remove gauze which was left in a surgical wound. While Dr. H. doubted whether he left the gauze in the wound, all of the evidence indicated that he did, and the case was a very dangerous one, and with the doctor's consent it was settled for $1000. The doctor had indemnity in the Medical Protective Company, which paid the amount.

B. S. R. vs. Dr. J. W. R.:

This case was brought for the March Term, 1924, in the District Court of Blackhawk County, for alleged x-ray burns, and claiming damages for $5000. This case was tried at Waterloo, resulting in a verdict of $200 for plaintiff. We filed a motion for new trial in this case, but after a conference with all the parties, we decided it was the part of wisdom to pay the judgment.

Dr. C. C. T. vs. W. C. W.:

This action was begun for the September Term, 1924, for the Jefferson County District Court. Dr. T. brought suit against the defendant for the amount of his professional services, amounting to $150. The defendant counter-claimed for $500 for alleged negligence in the treatment of a fracture of the femur of son. We have taken the position that the claim for malpractice is barred as an independent action and can only be used as an off-set against the plaintiff's claim and have filed demurrer, which demurrer was sustained and the case finally disposed of in November, 1925.

Mrs. M. C. R. vs. Dr. E. W. M. and S. D. C. and J. F. T.:

This was a case commenced in the District Court of Woodbury County, November Term, 1923, claiming damages in the amount of $50,000 for personal injuries inflicted upon plaintiff during the months of August and September, 1921, growing out of an operation removing her appendix and committing an abortion upon her, plaintiff being at the time three or four months advanced in pregnancy. This was rather an embarrassing case, as plaintiff's mental condition is questioned, and it was rumored plaintiff's brothers intended to institute insanity proceedings against her. The case was dismissed in February, 1926.

V. S. by B. F. S., his father and next friend vs. Dr. W. S. G. and Dr. H. H. G.:

This is an action brought in the Taylor County District Court, asking for $10,000 for alleged negligence in treating a gunshot wound in the thigh. This was still pending at the time of our last report and no effort had been made to bring it to trial. We filed a motion to require plaintiff to give bond for costs, he being a non-resident, which motion was sustained by the court and bond was ordered filed. The plaintiff neglected to file bond in time provided by court, and the court dismissed the case.

C. M. vs. Drs. F. and C. and R. F. F. and E. C., partners under the firm style of F. and C.:

This case involved paralysis of the facial nerves as the result of a mastoid operation. The case was tried in Marshalltown in March, 1924, and the jury disagreed. It was again tried and the jury again disagreed. Thereafter the plaintiff dismissed the suit without prejudice. The statute of limitations has run and the case is finally disposed of. Defendants had indemnity in the Medical Protective Company.

M. D. vs. Dr. F. W. Meyers:

This action was pending in the District Court of Dubuque County for the March Term, 1924, and damages were sought in the sum of $25,000, in the treatment of a fracture of the wrist. The case was set for trial for the October Term, 1925. The case was a rather complicated one with very bad results, and the doctor was quite anxious to settle it and he did so by paying the sum of $700. This settlement was in harmony with the doctor's wishes, and undoubtedly in view of the results such a settlement was a prudent one.

M. G., by his next friend, R. G. vs. Dr. L. A. H.:

This action was begun for the March Term, 1924, in the District Court of Wapello County. Damages were claimed for alleged negligence in the treatment of a broken leg, resulting in infection. We have made a long special report of the details of the settlement of this case and will not here go into them again. During the trial of the case we settled it for $100 and costs, amounting to $23.05. Dr. H. has left Iowa, and I think we are well rid of the case.

Cases Commenced Since the Date of Last Report and Since Disposed of

Mrs. F. R. vs. E. M. B.:

Original notice in this case was filed for the March Term, 1926, for the District Court of Marshall County. Damages were claimed for alleged negligence, in the sum of $27,000, in delivering the patient in confinement. Infection resulted. The original notice advised the defendant that the petition would be on file on or before February 25, 1926. No petition was ever filed, and therefore, the case is disposed of, but, of course, can be begun at any time. They precipitated by an effort on the part of the doctor to collect his fee. We have ad-

vised the doctor that it would be the part of wisdom to postpone any effort to collect his fee until after the statute of limitations has run.

F. S. vs. J. W. M.:

Notice was served in this action which was brought for the March Term, in the District Court of Polk County, claiming damages in the sum of $10,000, on account of injuries sustained resulting from negligent treatment. Patient was injured in an automobile accident suffering a comminuted compound fracture of the middle third of the left humerus. Patient was an employe of the Chicago, Great Western Railway Company. After treating the patient for some six or seven weeks, the doctor referred him to Dr. B. F. L. of Chicago. Plaintiff went to Chicago and was under the treatment of Dr. L. for some time, when he got a good firm union and freedom from infection and was able to resume his work. Nothing was heard from the plaintiff until defendant sent him a bill asking for payment. The defendant had indemnity in the Medical Protective Company and the company paid $200 to settle the case.

Dr. J. T. S. vs. M. L. and Mrs. M. L.:

This was an action by Dr. S. to collect a bill for professional services amounting to $34. The defendants counter-claimed for $999.99, being the limit of the jurisdiction of the Municipal Court of the City of Des Moines, where the action was brought. The counter-claim was based on an alleged negligence in diagnosing the patient's stomach trouble as pyloric ulcer with obstruction. Patient afterward went to the Mayo Clinic, which failed to confirm this diagnosis. The case was set for trial and the defendant's counter claim was dismissed and judgment rendered in favor of Dr. S. against the defendants for the full amount of his bill.

Cases Before the Committee on Medical Defense from April 1, 1925 to April 1, 1926

Cases before the Committee 19

Of the 19 cases two were cases of counterclaims, leaving 17 cases, 2 of which were not sued, leaving 15 of which notice of has been filed.

Two cases were carried over from last year and were before the Committee.

The offer of legal advice on questions relating to the activities of the profession through the Journal 11

The nature of the cases before the Committee from April 1, 1925 to April 1, 1926, were as follows:

Infection following childbirth	1
Fractures of several varieties	9
Death from tetanus—failure to administer antitoxin	1
Infection of finger (osteomyelitis)	1
Sponge in abdomen	1
Alleged error in diagnosis of ulcer of stomach	1
X-ray burns	2
Alleged drug addiction	1
Counterclaims	2

The total number of cases which have come to the attention of the Committee on Medical Defense since the organization of this department 394

Of which 266 were sued and 128 never came to suit, a total of 394.

In addition to cases of malpractice in which a legal opinion was sought of general interest to the profession, through the Journal 12

Altogether the number of cases that have come to the attention of the Committee 406

Of the 266 cases sued, 230 have been disposed of.

Cases now pending	36
The total amount claimed	$3,035,597.99
Total number of judgments rendered	11
The aggregate amount of judgments rendered	$15,876.00
The amount of judgments paid	
The amount paid in compromise	

The total cost of fees paid attorneys:

Chief attorney	
Local attorneys	
Total variety of claims	111

Variety of claims:

Fractures	108
X-ray burn	13
Radium burn	1
Sponge cases	6
Tonsils and adenoids	10

Condensed Report of Cases Against Members of the Iowa State Medical Society, 1925-1926

To Dr. D. S. Fairchild, Dr. H. B. Jennings and Dr. Lewis Schooler, Medical Defense Committee.

Gentlemen:

We have submitted full report upon all cases pending at the date of our last report and also of the cases commenced since that date. The following is a summary of certain particulars in all cases commenced since the establishment of the Medical Defense Committee of the Society:

Cases commenced since organization of department	266
Cases commenced prior to the report of 1909	15
Cases commenced during 1909-1910	13
Cases commenced during 1910-1911	10
Cases commenced during 1911-1912	14
Cases commenced during 1912-1913	13
Cases commenced during 1913-1914	10
Cases commenced during 1914-1915	24
Cases commenced during 1915-1916	19
Cases commenced during 1916-1917	17
Cases commenced during 1917-1918	13
Cases commenced during 1918-1919	14
Cases commenced during 1919-1920	7
Cases commenced during 1920-1921	12
Cases commenced during 1921-1922	13
Cases commenced during 1922-1923	16
Cases commenced during 1923-1924	14
Cases commenced during 1924-1925	20
Cases commenced during 1925-1926	15
Cases pending at date of 1909 report	7
Cases pending at date of 1910 report	10
Cases pending at date of 1911 report	14
Cases pending at date of 1912 report	25

Cases pending at date of 1913 report	26
Cases pending at date of 1914 report	21
Cases pending at date of 1915 report	28
Cases pending at date of 1916 report	33
Cases pending at date of 1917 report	33
Cases pending at date of 1918 report	29
Cases pending at date of 1919 report	29
Cases pending at date of 1920 report	26
Cases pending at date of 1921 report	30
Cases pending at date of 1922 report	26
Cases pending at date of 1923 report	33
Cases pending at date of 1924 report	37
Cases pending at date of 1925 report	38
Cases now pending	36
Total cases disposed of	230

Nature of Cases

Malpractice in removing seed wart	1
Malpractice in not discovering and uniting severed ligaments of the wrist	1
Alleged assault	2
Removal of cancer of the hand	1
Conspiracy to have plaintiff declared insane	2
Fracture of the arm	37
Fracture of leg or femur	58
Fracture of the jaw	1
Appendicitis—sponge case	2
Caesarian operation—sponge case	1
Cancer of breast—sponge case	1
Womb operation—sponge case	1
Operation—sponge case	1
Operation for kidney—sponge case	1
Operation—gall-bladder—sponge case	1
Appendicitis, malpractice in operation	5
Appendicitis—exploratory opening	1
Childbirth, alleged failure to attend after alleged agreement to do so; child died (separate actions by father and mother)	2
Childbirth, alleging negligence, mother died	1
Libel for testifying patient was insane	1
Hand crushed, alleged improper treatment	1
Failure to discover sub-caracoid dislocation of shoulder joint	1
Hand lacerated, alleged improper treatment	1
Ear, alleged improper treatment	2
Eye, alleged improper treatment	1
Infection, childbirth	3
Medical treatment of child	1
Abortion, improper after-treatment	3
Abortion, without justification	2
Improper treatment of nail puncture in foot	1
Alleged removal of wrong kidney	1
Stomach trouble, alleged improper treatment and failure to treat	1
Anesthetic, death under	2
Improper diagnosis of diphtheria	1
Improper diagnosis of broken ribs	1
Removal of uterus, alleged negligent incision of the bladder	1
X-ray burn	12
X-ray burn—disbursements	1
Infection following amputation	2
Alleged improper treatment of scald	1
Removal of adenoids	2
Alleged improper abdominal incision	3
Failure to administer serum, patient died of lockjaw	1
Fracture of collar bone	3
Fracture of skull	1
Willful insertion of instrument, producing abortion	2
Operation for pregnancy of fallopian tube	1
Negligence in administration of poison, causing death	1
Improper treatment of wound in leg from kick of horse	1
Alleged negligence in communicating erysipelas to woman in childbirth	1
Negligence in suffering patient mentally delinquent to jump out of unguarded window in private sanitorium	1
Improper treatment of broken tibia	2
Negligent amputation of finger	3
Negligence in attending and severing cords of hand	1
Wrongfully administering morphine	1
Communicating small-pox to patient in hospital	1
Fracture of lower jaw	1
Dislocation of knee	1
Cancer of stomach	1
Puncturing jugular vein	1
Failure to operate for removal of appendix	1
Negligence in treating hernia	1
Operation on nose of a minor without consent of parents resulting in death	1
Negligence in treating wrist	1
Failure to discover dislocation of ankle	1
Draining pelvic abscess	1
Operation for tonsils without consent	2
Negligent incision into intestine—ovarian tumor	1
Negligent diagnosis and treatment of pus in abdomen	1
Negligent treatment of infected jaw	1
Negligent treatment of infected antrum	1
Negligence in removing button from child's throat	1
Hot water bottle burn	2
Failure to discover fractured vertebra	1
Improper treatment of vaginal infection	2
Improper treatment of inflammatory rheumatism	2
Negligent removal of tonsils	4
Negligent removal of tonsils and adenoids	1
Negligent treatment of gunshot wound	4
Negligent treatment of abscess of bladder	2
Negligent treatment of abscess under arm	1
Wrong diagnosis of sprained ankle	1
Failure to properly tie umbilical cord	1
Failure to discover fracture of illium	1
Exposing patient to scarlet fever by wrong diagnosis	1
Improper treatment of insect bites	1
Negligent treatment of fractured finger	2
Improper treatment of fractured foot	1
Paralysis of facial nerves in mastoid operation	1
Failure to diagnose abscess of kidney	1
Malpractice—childbirth	1
Malpractice, diagnosing and treating typhoid fever	1
Malpractice, kidney irrigations	1
Malpractice, infection following injection for piles	1
Malpractice, childbirth, born dead	1
Malpractice, infection following operation for hernia resulting in death	1
Malpractice, alleged arsenic poisoning from medicine prescribed	1
Malpractice, electrical treatment for shingles	1
Malpractice, treatment pulmonary abscess	1
Malpractice, fracture of foot	1
Malpractice, repair of cervix, removal of appendix	1
Improper treatment of ligaments of wrist	1
Negligence in tying patient in bed, resulting in gangrene and amputation of leg	1
Exploratory opening for diagnostic purposes, negligence to person in exposing, resulting in death of child	1
Negligent burn by radium	2
Negligent treatment, dislocated shoulder	1
Syphilis	1
Treatment of osteomyelitis—improper	1
Slander—narcotic case	1
Improper diagnosis—stomach trouble	1

Total amount of damages claimed in all cases to date	$3,035,597.99
Judgments recovered against members	11
Aggregate amount of judgments	$ 15,876.00
Consultation on cases threatened in which no proceedings were had	128

Respectfully submitted,
Dutcher & McClain.

Iowa City, Iowa, May 1, 1926.

COMMITTEE ON SCIENTIFIC WORK

Secretary Throckmorton explained the work of this Committee and read a few letters from presidents of Sister State Associations congratulating this Society on its Diamond Jubilee Anniversary. He also read a letter from Wendell C. Phillips, President of the American Medical Association, after which it was moved and seconded that a telegram be sent to President Phillips, conveying to him the Society's appreciation of his letter and wishing him in return a happy and successful year as the head of our National Association.

In the absence of the Chairman of the Committee on Public Policy and Legislation, the report of this Committee was deferred until the Friday meeting.

At the request of the Chairman, Dr. V. L. Treynor, the report of suggested changes of the By-Laws, as recommended by Dr. O. J. Fay, Chairman Board of Trustees, was read by Secretary Throckmorton. The report follows:

REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

Be it resolved that Section 2 of Chapter III of the By-laws of the Iowa State Medical Society be repealed and the following adopted in lieu thereof:

The general meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and the public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the Board of Trustees.

Be it resolved that Sections 3, 4 and 5 of Chapter VI of the By-laws of the Iowa State Medical Society be repealed and the following adopted in lieu thereof:

Section 3. Treasurer—The Treasurer shall give bond in such sum as shall be determined by the Board of Trustees; such bond to be procured from some reliable surety company by the Trustees and to be approved by the Board of Trustees. The expense of procuring such bond shall be paid by this Society, and the bond shall be held by the Board of Trustees. All surplus money in the hands of the Treasurer shall be placed at interest in some bank approved by the Board of Trustees, or invested in United States bonds, and such interest shall be turned into the Treasury of the Society. The Treasurer shall demand and shall receive all funds due the Society from the Secretary, together with any bequests and donations. He shall pay money out of the Treasury only on a written order of the President, countersigned by the Secretary, and approved by the Board of Trustees. He shall subject his accounts to such examinations as the Board of Trustees may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessment against each component society at the end of the fiscal year; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him. The amount of the Treasurer's salary shall be fixed by the Board of Trustees, and shall be paid annually.

Section 4. Secretary—The Secretary, acting with the committee on scientific work, shall prepare and issue the programs for, and attend all meetings of the Society and of the House of Delegates; he shall keep minutes of their respective proceedings in separate record books and papers belonging to the Society, except such as properly belong to the Treasurer. He shall collect all assessments against each component society, and shall keep account of, and promptly turn over to the Treasurer, all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card index register of all the legal practitioners of the state by counties, noting on each the status in relation to the county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power, he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistance as may be ordered by the Board of Trustees. He shall annually make a report of his doings to the House of Delegates. In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the Board of Trustees and shall be paid quarterly. He shall give bond in the sum of $5,000, such bond to be procured from some reliable security company by the Board of Trustees, and to be approved by it. The expense of such bond shall be paid by the Society.

Section 5. The trustees at their first meeting after the annual session of the House of Delegates shall organize by electing a chairman. It shall be the duty of this Board to provide for and to superintend the publication of the Iowa State Medical Journal, and of all proceedings, transactions, and memoirs of the Society. It shall have full discretionary power to omit from The Journal, in part or in whole, any paper that may be referred to it. It shall appoint a managing director of the Society, and an editor of the Journal, which two positions may be held by one person, and such assistants as may be necessary, and shall determine their salaries and the terms and conditions of their employment. All resolutions or recommendations of the House of Delegates pertaining to the expenditure of money must be approved by the Board of Trustees before the same shall become effective. The Board of Trustees shall have the accounts of the Treasurer and of the

Journal office audited annually or oftener, if deemed necessary, and shall make an annual report to the House of Delegates. Should a vacancy occur, on account of death or otherwise, among the general officers of the Society, the Board of Trustees may fill such vacancy until the next annual session of the House, unless otherwise provided for in this Constitution and By-laws. The Board of Trustees shall fix the salary of the Secretary and of the Treasurer. Regular meeting of the Board shall be held immediately after the annual session of the House of Delegates, and monthly thereafter during at least nine of the calendar months. Special meetings of the Board may me called at any time by the chairman, or by two members of the Board. Two members of the Board shall constitute a quorum. During the intervals between sessions of the House of Delegates, the Board of Trustees shall supervise the action of committees, and may appoint emergency committees.

Be it resolved that Section 4 of Chapter VII of the By-laws of the Iowa State Medical Society be repealed, and the following enacted in lieu thereof:

Section 4. The Council shall be the special agency through which the State Medical Society shall communicate the views of the profession in regard to health, sanitation, and other important matters, to the public and to the lay press, and shall establish sustained working relations with other agencies concerned with related activities, formulate joint programs, and promote interest and activity in lines calculated to increase the adequacy, efficiency, and equality of distribution of applied medical science.

It shall be empowered to employ such help as it deems necessary, with the approval of the Board of Trustees; to enter into such working agreements with associated agencies as it may deem wise and necessary, to recruit volunteer speakers' bureaus, and to pay the actual expenses of such speakers.

Be it resolved that Chapter VIII of the By-laws of the Iowa State Medical Society be repealed, and the following enacted in lieu thereof:

Section 1. The Standing Committees shall be as follows:

A committee on scientific work (3).

A committee on public policy and legislation (5).

A committee on publication (5).

A committee on necrology (11).

A committee on nominations (11).

A committee on arrangements (5).

A medico-legal committee (3).

A committee on constitution and by-laws (3).

A committee on finance (3), and such other committees as may be necessary.

Such committees shall be selected by the House of Delegates unless otherwise provided.

Section 2. The Committee on Scientific Work shall consist of three members, the President, the Secretary, and the Treasurer, of which Committee the President shall be chairman, and shall determine the character and the scope of the scientific proceedings of the Society for each session, subject to the instructions of the House of Delegates, or of the Society, or to the provisions of the Constitution and By-laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions, and other business shall be presented, which shall be adhered to by the Society as nearly as possible.

Section 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates, it shall represent the Society in securing and enforcing legislation in the interest of public health and scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote its influence on local, state and national affairs, and elections. Its work shall be done with the dignity becoming a great profession and with that wisdom which will make effective its power and influence. It shall have authority to be heard before the entire Society upon questions of great concern, at such time as may be arranged during the Annual Session.

Section 4. The Committee on Publication shall consist of the Board of Trustees, the Editor of the Journal, and a fifth member to be elected by them. It shall have referred to it all the reports on scientific subjects and all scientific papers and discussions heard before the Society. It shall be empowered to curtail or abstract papers and discussions, and any paper referred to it which may not be suitable for publication in the Journal may be returned to the author. All papers read before the Society shall be the property of the Society.

Section 5. The Committee on Necrology shall consist of all the members of the Council, who shall prepare for each session suitable biographical notices of deceased members.

Section 6. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter V, Section 2 of these By-laws.

Section 7. The Committee on Arrangements shall consist of the Committee on Scientific Work, and two members elected by the component society in the territory in which the Annual Session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting places of the Society, of the House of Delegates, and of their respective committees, and shall have general charge of all arrangements. Its chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

Section 8. The Medico-Legal Committee shall consist of three members, all of whom shall serve without pay. The term of service of each member shall be three years. It shall be the duty of the

members of this committee, severally or collectively, to investigate all claims of malpractice against members, to adjust such claims in accordance with equity where possible, and, if in their judgment an adjustment is impossible, or the claim is unjust, or the damage sought is excessive, to lend such help, aid, and counsel as they may deem proper; but they shall not pay, or obligate the Society to pay, a judgment against any member; nor shall they pay, or obligate the Society to pay for legal counsel not authorized by the Board of Trustees. This shall not apply to the cost of transcribing evidence in appealed cases.

They shall effect such organization as they see fit, and adopt rules for their guidance, and for the guidance of the State Society in medico-legal matters. They shall be empowered, with the approval of the Board of Trustees, to contract with such agents (attorney or other) as they may deem necessary. All bills for medico-legal defense, after approval by the Committee and the Board of Trustees, shall be subject to warrants drawn on the general fund in the prescribed manner.

Section 9. The Committee on Constitution and By-laws shall consist of three members. It shall be the duty of the committee to propose such amendments to the Constitution and By-laws as is deemed wise and judicious, and to bring before the House of Delegates such amendments as it, or other members of the Society, may care to present for consideration.

Section 10. The Committee on Finance shall consist of three members, whose duty it shall be to audit the books of the Society, and to make a report of its findings to the House of Delegates.

Be it resolved that Sections 4 and 8 of Chapter XIV of the By-laws of the Iowa State Medical Society be repealed and the following adopted in lieu thereof:

Section 4. An Editor shall be elected by the Board of Trustees. His salary shall be fixed by the Board of Trustees, and shall be paid quarterly. Salaries and other expenses shall be paid by the Treasurer on a written order of the Secretary countersigned by the President when authorized by the Board of Trustees.

Section 8. The Committee on Publication shall have oversight of the publication of the Journal subject to the order of the Board of Trustees. The Trustees shall audit the books of the Editor and authorize any contract which may be necessary.

Be it further resolved that all parts of the By-laws in conflict with these amendments are hereby repealed.

This report, in accordance with the Constitution and By-Laws, was laid upon the table for consideration at a future meeting.

The report of the Publication Committee was presented by Dr. D. S. Fairchild, Editor and Chairman, which upon motion by Dr. C. J. Saunders, seconded and carried, was accepted.

THE REPORT OF THE PUBLICATION COMMITTEE

The Committee through the editor of the Journal has made a somewhat detailed special report to the Board of Trustees.

The general make up and character of the Journal has been presented to you each month.

There is one fact in relation to our Journal we might call attention to, and that is the general fact of liberal support of the Journal, as measured by the size.

The Journal of the Iowa State Medical Society in 1925 published 680 pages.

	Pages
Journal of the Virginia State Society	812
Journal of the Nebraska State Society	493
Journal of the Rhode Island State Society	208
Journal of the Ohio State Society	968
Journal of the New York State Society	1,092
Journal of the West Virginia State Society	672
Journal of the Illinois State Society	1,000
Journal of the California and Utah State Society	1,664
Journal of the Missouri State Society	760
Journal of the Georgia State Society	524
Journal of the Northwest State Society (including Oregon, Washington, Idaho and Montana)	644
Journal of the Kentucky State Society	580
Journal of the South Carolina State Society	310
Journal of Minnesota Medicine	760
Journal Lancet	606
Journal of the Indiana State Society	486

The cooperation of the profession of the state has materially improved and the editor has very little at this time to say in the way of criticism. We have carried two papers a year because we did not know the author's name, where he lived or what society the paper was read before. Accidently it came to our knowledge, much to our relief because they were good papers. We do not need to say how this information could be conveyed to the editor.

There has been a gradual improvement in the reporting of local societies by secretaries.

We must again urge authors of papers to double space the copy and give at least an inch margin on the left hand side of the paper.

Des Moines, Iowa, May 11, 1926.

D. S. Fairchild, M.D.,
Chairman, Publication Committee.

Dear Doctor Fairchild:

I am submitting herewith statement of the Journal for the year 1925 and a supplementary statement from January 1, 1926 to May 1, 1926.

Sincerely yours,
C. G. Throckmorton,
Executive Secretary.

JOURNAL STATEMENT

January 1, 1925 to January 1, 1926

Income

Advertising	$ 7,684.46
Reprints	1,258.12
Subscriptions	81.25
Sales	115.96
Honorarium—Advertising Bureau, A. M. A.	265.30

Subscriptions, 1924	4.00	
Subscriptions, 1925	4,776.00	
	$14,450.39	
Accounts Receivable—		
Reprints	$ 517.49	
Advertising	927.78	
	$ 1,445.27	$15,895.66

Expense

Printing—		
2-80 Page Journals	$ 1101.44	
1-84 Page Journal	602.84	
4-88 Page Journals	2,486.35	
3-92 Page Journals	2,007.65	
1-96 Page Journal	722.44	
1-116 Page Journal	817.09	
	$ 7,737.82	
1,071 Pages—average issue 2,638 copies		
Engravings	$ 238.40	
Reprints	1,288.25	
Commission and discount	1,132.32	
News service	60.00	
Second class postage and city delivery	249.00	
Office rent and towel service	480.55	
Postage and express	127.69	
Telephone and telegraph	39.00	
Trustees' meeting (Journal share)	25.13	
Editor's salary	1,500.00	
Editor's stenographer	125.40	
Journal wrappers	85.00	
Supplies and stationery	91.20	
Executive secretary, salary	1,520.83	
Miscellaneous	78.78	
Bond for secretary and treasurer	43.75	
		$14,823.12
Gain		1,072.54
		$15,895.66

JOURNAL STATEMENT

January 1, 1926 to May 1, 1926

Income

Advertising	$ 8,204.80	
Reprints	672.69	
Subscriptions	53.85	
Sales	31.53	
Dues	2,616.00	
	$11,578.87	
Accounts Receivable—		
Reprints and advertising	$ 558.74	
		$12,137.61

Expense

Printing—		
1-80 Page Journal	$ 552.00	
1-88 Page Journal	685.59	
1-92 Page Journal	824.47	
1-84 Page Journal	587.98	
	$2,650.04	
Engravings	$ 153.05	
Reprints	189.63	
News service	15.00	
Second class postage and city delivery	88.00	
Editor's salary	750.00	
Editor's stenographer	117.35	
Journal wrappers	92.40	
Furniture and fixtures	354.75	
Office rent and towel service	217.50	
Postage and express	61.71	
Telephone and telegraph	13.00	
Trustees' meeting	5.54	
Supplies and stationery	12.95	
Executive Secretary, salary	500.00	
Commission and discount	312.50	
Check made good—insufficient funds	4.25	
	$ 2,137.63	$ 4,787.67
Gain		$ 7,349.94
		$12,137.61

Under the head of Special Committees the report of the Medical Library Committee was presented by Dr. D. S. Fairchild, Chairman. Upon motion by Dr. J. F. Herrick, which was duly seconded, the Committee's report was accepted and placed on file.

THE REPORT OF THE MEDICAL LIBRARY COMMITTEE

The following statistics comparing the services rendered by the Iowa State Medical Library in the year 1924 with like services in the year 1925 are respectfully submitted.

Number of bound volumes in the library, 1924	6,809
Number of bound volumes in the library, 1925	7,790
No. of unbound volumes in the library, 1924	2 tons unclassified
Number of unbound volumes in the library, 1925	No less
Number of medical journals regularly received, 1924	158
Number of medical journals regularly received, 1925	192
Number of medical journals regularly received—English	183
Number of medical journals regularly received—German	4
Number of medical journals regularly received—French	4
Number of visitors, 1924	1,362
Number of visitors, 1925	1,686
Number of books and periodicals loaned, 1924	6,306
Number of books and periodicals loaned, 1925	7,041

Annual Appropriations Granted by Legislature

	1920	1923	1925
Maintenance	$2,000	$2,000	$2,000
Medical librarian	2,000	2,000	2,000
Assistant librarian	.....	1,400	1,600
Assistant librarian	.....	.....	1,200
	$4,000	$5,400	$6,800

Annual Appropriations Needed at This Time

Maintenance	$ 3,000
Medical librarian	3,000
Assistant librarian	2,000
Assistant librarian	2,000
Reference and research librarian	2,500
Package librarian	2,000
	$14,500

Dr. B. L. Eiker, Chairman of a Special Committee to confer with those having to do with securing an adequate appropriation for the State Medical Library, read the Committee's report, which upon motion by Dr. D. J. Townsend, was duly seconded, accepted, and placed on file.

THE REPORT OF THE SPECIAL COMMITTEE ON ADDITIONAL FINANCIAL SUPPORT FOR THE STATE MEDICAL LIBRARY

Your Committee appointed for the purpose of securing additional financial support from the State for the Iowa State Medical Library beg leave to report that they appeared before the Committee on Retrenchment and Reform but were unable to secure any additional aid. The interpretation placed upon that phase of the law relating to emergencies was such that our needs did not come under its provision. Your Committee recommend that the House of Delegates request the Legislative Committee of the Iowa State Medical Society to immediately take this matter up with the Director of the Budget, and also ask the Governor to give it favorable consideration in his next message to the State Legislature. We further recommend that the Legislative Committee be asked to make it one of their major duties when the next Legislature convenes to procure additional appropriations, clerical assistance, and adequate quarters for the Iowa State Medical Library.

Respectfully submitted,
B. L. Eiker,
Julius S. Weingart,
C. E. Ruth,
W. E. Sanders.

The Chairman then called for the report of the Field Activities Committee, which was verbally presented by Dr. W. L. Bierring, Chairman. Upon motion by Dr. Paul E. Gardner, duly seconded, the Committee's report was accepted.

In the absence of Dr. Donald Macrae, Chairman, the report of the Special Committee on Military Affairs was deferred.

MEMORIALS AND COMMUNICATIONS

Secretary Throckmorton then read a letter from Dr. Olin West, Secretary of the American Medical Association, in reference to the preparation of a model Constitution and By-laws for Constituent State Associations, and moved that the matter be referred to the Committee on Constitution and By-Laws, to be reported upon at the Friday meeting. Seconded and carried.

The Secretary then read a communication from Dr. W. C. Woodward, Secretary of Bureau of Legal Medicine and Legislation of the American Medical Association, in reference to a bill now pending in the United States Senate in regard to the Harrison Narcotic Law, and moved that the matter be referred to the Committee on Public Policy and Legislation, the Committee to report at the Friday meeting; seconded and carried.

The Secretary then read a communication from Dr. N. P. Colwell, Secretary of Medical Education and Hospitals of the American Medical Association, asking for the appointment of a Hospital Committee, and moved that the House create a Special Committee consisting of three members to be nominated by the Nominating Committee, to serve terms of one, two and three years. The motion being duly seconded was carried.

The Secretary then read a letter from Dr. W. B. Small, Waterloo, tendering his resignation as a member of the Board of Trustees. Upon motion by Dr. C. J. Saunders, Ft. Dodge, duly seconded, the resignation was accepted.

The Secretary then read a letter from Dr. O. J. Fay, Chairman of the Board of Trustees, tendering his resignation, the same to take place at the close of the present Annual Session of the Society. Dr. H. J. Prentiss, moved that the resignation be not accepted; duly seconded. Dr. C. B. Taylor, Ottumwa, amended the motion by moving that it be laid on the table; duly seconded and carried.

NEW BUSINESS

Dr. J. C. Hancock, Dubuque, presented a resolution passed by the Dubuque County Medical Society, January 12. Dr. J. F. Herrick, Ottumwa, moved that the resolution be received and referred to the Legislation Committee; seconded and carried.

Dr. D. N. Loose, Maquoketa, presented a resolution referable to the periodic health examination of apparently well persons. Dr. J. F. Herrick, moved the reception of the resolution and that it be referred to the Committee on Public Policy and Legislation; seconded and carried.

The Secretary moved that the dues of Dr. F. M. McCrea, of Eddyville, be rescinded for the current year; seconded. An amendment was offered to the original motion that the dues be rescinded during the lifetime of Dr. McCrea; seconded and carried. The motion as amended was then put and upon being duly seconded, was carried.

Dr. W. W. Beam, Councilor of the Tenth District, presented a resolution recommending "that the charter of the Humboldt County Medical Society be revoked and the last known secretary of the Humboldt County Medical Society be requested to return its charter to the Secretary of the Iowa State Medical Society"; seconded.

Secretary Throckmorton then explained that he disliked very much to have an absence of organized medicine in any of the Constituent County Societies, stating that if Humboldt County failed to send in a roster of its officers and members before the next Annual Session the charter would automatically become revoked, and moved that the resolution be laid on the table; seconded and carried.

The Secretary then moved that telegrams be sent to Doctors W. B. Small, Waterloo; J. R. Guthrie, Dubuque; Olin West, Chicago, and Franklin Gengenbach, Denver, expressing the sympathy of the Society in the matter of illness of these gentlemen, and conveying to them the hope of the Society for a speedy convalescence. Seconded and carried.

The Secretary then moved that telegrams of felicitation and good-will be sent to the following Sister State Societies, whose Annual Meetings were coincident with that of the Iowa Society: Medical Association of Georgia, Albany; Mississippi State Medi-

cal Association, Jackson; Nebraska State Medical Association, Omaha; Ohio State Medical Association, Toledo; Tennessee State Medical Association, Memphis.

Upon being duly seconded the motion was carried.

Dr. A. D. Wood, Marshalltown, presented a resolution from the Marshall County Medical Society endorsing the candidacy of Senator Scott, for the office of Lieutenant Governor of this State. Dr. D. J. Townsend moved that the resolution be tabled; seconded and carried.

Dr. R. A. Becker, Atlantic, presented a resolution from the Cass County Medical Society opposing any movement tending to the formation of State Medicine. Dr. J. F. Herrick, Ottumwa, moved that the resolution be referred to the Committee on Public Policy and Legislation; seconded and carried.

President Spilman then stated that inasmuch as a resolution amending the By-Laws of the State Medical Society had been presented, a special meeting of the Society would be called to act on this resolution Thursday A. M., May 13, at seven o'clock.

The meeting was then adjourned, at 5:15 p. m.

The delegates from the various congressional districts then assembled to select a member from their various districts to act as members of the Nominating Committee. The Committee reported was as follows:

First District—C. A. Boice, Washington.
Second District—Paul A. White, Davenport.
Third District—W. L. Hearst, Cedar Falls.
Fourth District—Walter R. McCray, Charles City.
Fifth District—M. H. Thielen, Grundy Center.
Sixth District—A. P. Johnson, Sigourney.
Seventh District—John H. Peck, Des Moines.
Eighth District—Benj. S. Walker, Corydon.
Ninth District—V. L. Treynor, Council Bluffs.
Tenth District—C. J. Saunders, Fort Dodge.
Eleventh District—B. A. Melgaard, Sioux City.

Second Meeting, Thursday, May 13

The House of Delegates met in the Oak Room of the Hotel Fort Des Moines, and was called to order at 7:05 a. m., by President Spilman.

Roll call showed the presence of 12 officers and 68 delegates, making a total of 80. The President announcing that a quorum was present, the House proceeded to the transaction of business.

President Spilman announced that this special meeting had been called to consider proposed amendments to the By-Laws of the State Society, and called on Dr. V. L. Treynor, Council Bluffs, Chairman of the Committee on Constitution and By-Laws, to present the proposed amendments. The proposed changes were taken up a Section at a time, and the first to be presented was a resolution that Section 2, of Chapter III, of the By-Laws, be repealed and the following adopted in lieu thereof:

"The general meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and the public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the Board of Trustees."

Upon motion by Dr. D. N. Loose, Maquoketa, duly seconded, the above Section was adopted.

Chairman Treynor then read the following resolution: Be it resolved that Sections 3, 4 and 5 of Chapter VI of the By-Laws be repealed and the following adopted in lieu thereof:

"Section 3. Treasurer—The Treasurer shall give bond in such sum as shall be determined by the Board of Trustees; such bond to be procured from some reliable security company by the Trustees and to be approved by the Board of Trustees. The expense of procuring such bond shall be paid by this Society, and the bond shall be held by the Board of Trustees. All surplus money in the hands of the Treasurer shall be placed at interest in some bank approved by the Board of Trustees, or invested in United States bonds, and such interest shall be turned into the treasury of the Society. The Treasurer shall demand and shall receive all funds due the Society from the Secretary, together with any bequests and donations. He shall pay money out of the treasury only on a written order of the President, countersigned by the Secretary, and approved by the Board of Trustees. He shall subject his accounts to such examinations as the Board of Trustees may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his books the assessment against each component society at the end of the fiscal year; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him. The amount of the Treasurer's salary shall be fixed by the Board of Trustees, and shall be paid annually."

Dr. Paul E. Gardner, New Hampton, moved that Section 3, be adopted as read. Seconded and carried.

Section 4, was then read by Chairman Treynor, as follows:

"Secretary—The Secretary, acting with the committee on scientific work, shall prepare and issue the programs for, and attend all meetings of the Society and of the House of Delegates; he shall keep minutes of their respective proceedings in separate record books and papers belonging to the Society, except such as properly belong to the Treasurer. He shall collect all assessments against each component society, and shall keep account of, and promptly turn over to the Treasurer, all funds of the Society which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card index register of all the legal practitioners of the state by counties, noting on each the status in relation to the county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power, he shall use

the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistance as may be ordered by the Board of Trustees. He shall annually make a report of his doings to the House of Delegates. In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the Board of Trustees and shall be paid quarterly. He shall give bond in the sum of $5,000, such bond to be procured from some reliable security company by the Board of Trustees, and to be approved by it. The expense of such bond shall be paid by the Society."

Dr. C. A. Boice, Washington, moved the adoption of the Section as read; seconded and carried.

Chairman Treynor then read Section 5, of the proposed amendments to the By-Laws:

"Section 5. The Trustees at their first meeting after the annual session of the House of Delegates shall organize by electing a chairman. It shall be the duty of this Board to provide for and to superintend the publication of the Iowa State Medical Journal, and of all proceedings, transactions, and memoirs of the Society. It shall have full discretionary power to omit from The Journal, in part or in whole, any paper that may be referred to it. It shall appoint a managing director of the Society; and an editor of the Journal, which two positions may be held by one person, and such assistants as may be necessary, and shall determine their salaries and the terms and conditions of their employment. All resolutions or recommendations of the House of Delegates pertaining to the expenditure of money must be approved by the Board of Trustees before the same shall become effective. The Board of Trustees shall have the accounts of the Treasurer and of the Journal office audited annually or oftener, if deemed necessary, and shall make an annual report to the House of Delegates. Should a vacancy occur, on account of death or otherwise, among the general officers of the Society, the Board of Trustees may fill such vacancy until the next annual session of the House, unless otherwise provided for in this Constitution and By-Laws. The Board of Trustees shall fix the salary of the Secretary and of the Treasurer. Regular meeting of the Board shall be held immediately after the annual session of the House of Delegates, and monthly thereafter during at least nine of the calendar months. Special meetings of the Board may be called at any time by the chairman, or by two members of the Board. Two members of the Board shall constitute a quorum. During the intervals between sessions of the House of Delegates, the Board of Trustees shall supervise the action of committees, and may appoint emergency committees."

It was moved by Dr. C. A. Boice, Washington, and duly seconded, that the Section be adopted. Drs. Treynor, Prentiss, Sampson, Taylor, Burcham, Fay, and Kenefick, discussed the proposed change.

Dr. O. J. Fay moved an amendment to the proposed Section, that the words "together with the Secretary" be inserted after the word "appoint", in the fourteenth line of the copy now in the hands of the delegates; and that the words "and the Board of Trustees shall appoint", immediately following the semicolon after the word "Society" in line fifteen of the copy; making the Section as proposed and amended read as follows:

"Section 5. The Trustees at their first meeting after the annual session of the House of Delegates shall organize by electing a chairman. It shall be the duty of this Board to provide for and to superintend the publication of the Iowa State Medical Journal, and of all proceedings, transactions, and memoirs of the Society. It shall have full discretionary power to omit from The Journal, in part or in whole, any paper that may be referred to it. It shall appoint, together with the Secretary, a managing director of the Society; and the Board of Trustees shall appoint an editor of the Journal, which two positions may be held by one person, and also such assistants as may be necessary, and shall determine their salaries and the terms and conditions of their employment. * * * ."

Upon being duly seconded, the amendment to the proposed amendment of Section 5, was adopted; after which, upon motion duly seconded, the proposed amendment as amended was adopted.

Chairman Treynor, then read the following resolution, that Section 4 of Chapter VII of the By-Laws, be repealed and the following enacted in lieu thereof:

"Section 4. The Council shall be the special agency through which the State Medical Society shall communicate the views of the profession in regard to health, sanitation, and other important matters, to the public and to the lay press, and shall establish sustained working relations with other agencies concerned with related activities, formulate joint programs, and promote interest and activity in lines calculated to increase the adequacy, efficiency, and equality of distribution of applied medical science.

"It shall be empowered to employ such help as it deems necessary, with the approval of the Board of Trustees; to enter into such working agreements with associated agencies as it may deem wise and necessary, to recruit volunteer speakers' bureaus, and to pay the actual expenses of such speakers."

Dr. C. A. Boice, Washington, moved the adoption of the resolution, which upon being seconded, was carried.

Chairman Treynor then read the following resolution, that Section 1 of Chapter VIII, of the By-Laws, be repealed and the following enacted in lieu thereof:

"Section 1. The standing committees shall be as follows: A committee on scientific work (3). A committee on public policy and legislation (5). A committee on publication (5). A committee on necrology (11). A committee on nominations (11). A committee on arrangements (5). A medico-legal committee (3). A committee on constitution and by-laws (3). A committee on finance (3); and such other committees as may be necessary. Such committees shall be selected by the House of Delegates unless otherwise provided."

Upon motion by Dr. J. F. Herrick, Ottumwa, duly seconded, the resolution was adopted.

Chairman Treynor then read Section 4, Chapter VIII, of the By-Laws, as follows:

"Section 4. The Committee on Publication shall consist of the Board of Trustees, the Editor of the Journal, and a fifth member to be elected by them. It shall have referred to it all the reports on scientific subjects and all scientific papers and discussions heard before the Society. It shall be empowered to curtail or abstract papers and discussions, and any paper referred to it which may not be suitable for publication in the Journal may be returned to the author. All papers read before the Society shall be the property of the Society."

Dr. J. F. Herrick, Ottumwa, moved the adoption of the Section; seconded.

Dr. O. J. Fay, moved as an amendment to the proposed Section that the words "fifth member to be elected by them", appearing in the fourth and fifth lines of the copy, be stricken and the word "Secretary" be inserted in lieu thereof. Seconded and carried.

Chairman Treynor moved the adoption of the Section as amended, and upon being duly seconded, it was adopted.

Section 8, Chapter VIII of the By-Laws, was next read by Chairman Treynor, who called attention to the fact that the terms of service of the Committee were not specifically defined, and recommended that the wording as found in the original By-Laws pertaining to this service be adhered to. There being no objections, the Section, on motion by Dr. C. A. Boice, Washington, duly seconded, was adopted to read as follows:

"Section 8. The Medico-Legal Committee shall consist of three members, all of whom shall serve without pay. The term of service of each member shall be three years, provided that in the original organization of this committee the service shall be grouped by lot into three divisions with terms expiring in one, two and three years respectively. It shall be the duty of the members of this committee, severally or collectively, to investigate all claims of malpractice against members, to adjust such claims in accordance with equity where possible, and, if in their judgment an adjustment is impossible, or the claim is unjust, or the damage sought is excessive, to lend such help, aid, and counsel as they may deem proper; but they shall not pay, or obligate the Society to pay, a judgment against any member; nor shall they pay, or obligate the Society to pay for legal counsel not authorized by the Board of Trustees. This shall not apply to the cost of transcribing evidence in appealed cases.

"It shall effect such organization as it sees fit, and adopt rules for its guidance, and for the guidance of the State Society in medico-legal matters. It shall be empowered, with the approval of the Board of Trustees, to contract with such agents (attorney or other) as they may deem necessary. All bills for medico-legal defense, after approval by the Committee and the Board of Trustees, shall be subject to warrants drawn on the general fund in the prescribed manner."

Chairman Treynor then read the resolution, that Sections 4 and 8, Chapter XIV, of the By-Laws, be repealed and the following adopted in lieu thereof:

"Section 4. An Editor shall be elected by the Board of Trustees. His salary shall be fixed by the Board of Trustees, and shall be paid quarterly. Salaries and other expenses shall be paid by the Treasurer on a written order of the Secretary countersigned by the President when authorized by the Board of Trustees."

Upon motion by Dr. C. A. Boice, Washington, duly seconded, this Section was adopted.

Section 8 was then read by Chairman Treynor, who pointed out that this Section was a duplication of the duties already assigned the Committee on Publication. The motion by Dr. J. F. Herrick, Ottumwa, duly seconded, that all but the last clause, "Be it further resolved that all parts of the By-Laws in conflict with these amendments are hereby repealed", be struck out, was then put and the motion carried.

Dr. C. A. Boice, Washington, then moved the adoption as a whole of the amendments as amended. Seconded and carried.

Dr. O. J. Fay, Chairman of the Board of Trustees, in a few well chosen words then stated the financial situation of the Society and moved that Chapter IX, Section 1, of the By-Laws be amended as follows: "That the words five dollars ($5) appearing in line one, of Section 1, be stricken out, and the words seven dollars and fifty cents ($7.50) be inserted in lieu thereof."

President Spilman then stated that the proposed change in the By-Laws as recommended by Dr. O. J. Fay, would lay on the table to be taken up at the Friday p. m. meeting. There being no further business to come before this Special Session regarding proposed changes in the Constitution and By-Laws, the Society adjourned at 8:15 a. m., to meet at 1:30 p. m. Friday.

Third Meeting, Friday Afternoon, May 14

The House of Delegates met in the Ball Room of the Hotel Fort Des Moines, and was called to order by President Spilman, at 1:35 p. m.

The minutes of the first and special meetings were read by the Secretary and there being no corrections

or objections, the Chair stated that the minutes would stand approved as read.

REPORT OF THE COMMITTEE ON NOMINATIONS

The report of the Committee on Nominations being the first order of business, Dr. Charles J. Saunders, Fort Dodge, Chairman, presented the report as follows:

For the office of President-Elect—Dr. T. U. MacManus, Waterloo; Dr. Charles Magee, Burlington; Dr. M. J. Kenefick, Algona.

For First Vice-President—Dr. F. G. Murray, Cedar Rapids.

For Second Vice-President—Dr. L. C. Kern, Waverly.

For member Board of Trustees for three years—Dr. J. F. Herrick, Ottumwa.

For member Board of Trustees for one year to fill vacancy—Dr. V. L. Treynor, Council Bluffs.

For Delegates to A. M. A. for two year term—Dr. Donald Macrae, Council Bluffs; Dr. B. L. Eiker, Leon.

For Delegates to the A. M. A. for one year term—Dr. John C. Rockafellow, Des Moines; Dr. William Jepson, Sioux City.

For Alternate Delegates to the A. M. A. for two year term—Dr. Thomas A. Burcham, Des Moines; Dr. John F. Herrick, Ottumwa.

For Alternate Delegates to the A. M. A. for one year term—Dr. Thomas F. Thornton, Waterloo; Dr. C. A. Boice, Washington.

Standing Committees

For Member Medico-Legal Committee—Dr. H. C. Eschbach, Albia.

For Public Policy and Legislation Committee—Dr. W. W. Pearson, Des Moines; Dr. J. F. Edwards, Ames; Dr. Thomas A. Burcham, Des Moines.

For Finance Committee—Dr. Ernest C. McClure, Bussey; Dr. Daniel F. Houston, Burlington; Dr. Chas. W. Ellyson, Waterloo.

For Medical Library Committee—Dr. D. S. Fairchild, Clinton; Dr. C. R. Harken, Osceola; Dr. F. A. Hennessy, Calmar.

For Meeting Place, 1927—Des Moines or Council Bluffs.

Secretary Throckmorton moved that the report be accepted. The motion being duly seconded, was carried.

Election of Officers

The House then proceeded to an election.

The President appointed Dr. George B. Crow, Burlington and Dr. Paul E. Gardner, New Hampton, as tellers.

The ballot was then taken for the office of President-Elect.

Secretary Throckmorton then announced that it would be necessary to know the number of officers and delegates present who would be entitled to vote, before a ballot could be taken. Roll call showed the presence of 11 officers and 55 delegates. A roll call of the delegates by counties was dispensed with by consent of the House.

The first ballot of 65 votes resulted in a non-election, inasmuch as none of the nominees received a majority vote. Dr. H. J. Prentiss, Iowa City, moved that the nominee receiving the smallest number of ballots be dropped. Seconded. Dr. Samuel Bailey, Mt. Ayr, moved that the motion be tabled; seconded and carried.

On re-ballot 63 votes were cast, resulting in no election, none of the nominees having received a majority of the votes cast.

The Chair then ordered a third ballot to be taken. Sixty-five votes were cast and of this number Dr. Michael J. Kenefick, Algona, having received 34, the Chair declared him elected to the office of President-Elect for the coming year.

Dr. W. L. Hearst, Cedar Falls, moved that Dr. M. J. Kenefick's election be made unanimous; seconded and carried.

Dr. C. A. Boice, Washington, moved that, as there was but one candidate for the other offices and committees, the rules be suspended and the Secretary be instructed to cast the ballot for the remaining officers and committee members as reported by the Nominating Committee; seconded.

Secretary Throckmorton then called attention to the lack of recommendation made by the Nominating Committee for members of the Committee on Constitution and By-Laws. The Chairman of the Nominating Committee, Dr. C. J. Saunders, Fort Dodge, stated that the absence of this Committee from the list reported to the House of Delegates was an oversight on the part of the Committee. He informed the House that the same members as served last year were recommended to be continued.

The Chair then put the motion of Dr. C. A. Boice, and the same was carried.

The Secretary then cast the ballot and the Chair declared the remaining officers and committee members duly elected.

Secretary Throckmorton then called attention to the recommendation of the Nominating Committee for the place of meeting for 1927, stating that while Des Moines and Council Bluffs had been recommended he had received some months ago, an invitation from the Lynn County Medical Society, and from the Chamber of Commerce, Cedar Rapids, to make Cedar Rapids the place of meeting next year; and that owing to the press of Society affairs he had unintentionally failed to place the invitation in the hands of the Nominating Committee prior to its report.

Before taking a ballot for the place of meeting next year, Dr. George E. Crawford, Cedar Rapids, and Dr. Donald Macrae, Council Bluffs, spoke concerning their respective cities as a meeting place.

The House then proceeded to take a ballot for a place of meeting. Out of the 64 votes cast, Council Bluffs received 46, and the Chair declared that Council Bluffs would be the next place of meeting.

Secretary Throckmorton then moved that the Session be held May 11, 12 and 13, 1927; seconded and carried.

REPORT OF COMMITTEES

No further report from the Board of Trustees.

No report from the Committee on Public Policy and Legislation.

REPORT OF COMMITTEE ON THE CONSTITUTION AND BY-LAWS

Chairman Treynor, then read the resolution presented at the Thursday morning meeting by Dr. O. J. Fay, proposing to amend Chapter IX, Section 1, of the By-Laws, as follows:

That the words "five dollars ($5.00)" appearing in line one, Section 1, be stricken out and the words "seven dollars and a half ($7.50)" be inserted in lieu thereof.

Dr. Paul E. Gardner, New Hampton, moved the adoption of the amendment; seconded and unanimously carried.

REPORT OF THE FINANCE COMMITTEE

The report of the Finance Committee was made by the Chairman of the Committee, Dr. Ernest C. McClure, Bussey. Dr. McClure stated that the finances of both Secretary and Treasurer were entirely satisfactory to the Committee, and wondered really what function this Committee had inasmuch as the Trustees had so carefully audited the books of both Secretary and Treasurer. Dr. O. J. Fay, Chairman Board of Trustees, stated in reply that he believed it was wise to have a Finance Committee, which in turn could act as an auditing committee concerning the transactions of the Board of Trustees.

Dr. John T. Hanna, Burlington, moved the adoption of the Committee's report; seconded and carried.

MILITARY AFFAIRS

The Report of the Special Committee on Military Affairs being called for, Dr. Donald Macrae, Council Bluffs, Chairman of the Committee, made a verbal report, stating that the Committee had had no special activity during the past year, but recommended its continuance.

Secretary Throckmorton moved that the Special Committee on Military Affairs be continued for another year; seconded and carried.

NEW BUSINESS

Secretary Throckmorton then called attention to the fact that the Nominating Committee in its report, had failed to recommend members to serve on the Special Committee designated by the House of Delegates as the Hospital Committee. Dr. C. J. Saunders, Ft. Dodge, Chairman of the Nominating Committee, stated that the Committee had failed to make such recommendation and moved that the incoming President, Dr. T. E. Powers, Clarinda, and the Secretary, Dr. Tom B. Throckmorton, be authorized to select three members to serve on this Committee, the terms of service to be one, two, and three years, respectively. Seconded and carried.

Dr. H. J. Prentiss, Iowa City, stated that Dr. B. L. Eiker, Leon, had asked him to present the following resolution:

"Whereas, the Iowa State Medical Society Library has proved of inestimable value to the Medical and Dental professions of the state, and

"Whereas, said Library is sorely in need of additional clerical help, more commodious quarters, and increased appropriations, therefore

"Be It Resolved, that the House of Delegates of the Iowa State Medical Society appoint a committee of five, consisting of the President of the Iowa State Medical Society, the President-Elect, Drs. Conrad Harken, C. E. Ruth, and W. E. Sanders, to continue the work and endeavor to secure the needed help for the Medical Library."

Respectfully submitted,
Bert L. Eiker.

Dr. H. J. Prentiss, moved the adoption of the resolution. Seconded.

Secretary Throckmorton then called attention to the fact that the members of the Library Committee for the ensuing year were Dr. D. S. Fairchild, Clinton; Dr. C. R. Harken, Osceola, and Dr. F. A. Hennessy, Calmar; whereas in the resolution just adopted appointing a committee of five to continue the work of the Special Committee appointed by President Fuller in 1925, that it made a duplication of committee work; and moved as an amendment to the resolution, that the committee for this special work consist of the members of the Library Committee together with the President, Dr. T. E. Powers, Clarinda, President-Elect, Dr. M. J. Kenefick, Algona; Dr. C. E. Ruth and Dr. W. E. Sanders, Des Moines. Upon being seconded by Dr. O. J. Fay, the amendment carried. The motion as amended was then put by the Chair and the resolution was adopted.

Dr. O. J. Fay, moved that a copy of this resolution be sent to Mr. E. L. Hogue, at the State House. Seconded and carried.

Secretary Throckmorton then read a telegram sent from the Medical Association of Georgia, extending greetings and best wishes to the Iowa State Medical Society on the celebration of its Diamond Jubilee Anniversary.

Dr. O. J. Fay, Chairman of the Board of Trustees, then made a few remarks stating that the policy of the Board in Medico-Legal matters for the coming year would remain unchanged, but that the Board desired the officers and delegates to ponder the question as to the advisability of continuing legal defense and to come back to the meeting next year with such suggestions as they or their County Societies saw fit to present and recommend.

Secretary Throckmorton then announced that the delegates from the third district elected Dr. Fred F. Agnew, Independence, as Councilor for a term of five years, to succeed Dr. Amos G. Shellito; and the delegates of the Tenth District re-elected Dr. Watson W. Beam, Rolfe, to succeed himself.

There being no further business to come before the House of Delegates, the same was adjourned sine die at 3:15 p. m.

Tom B. Throckmorton,
Secretary.

IOWA STATE MEDICAL SOCIETY OFFICERS AND COMMITTEES 1926-1927

President — Thomas E. Powers, Clarinda
President-Elect — Michael J. Kenefick, Algona
First Vice-President — Frederick G. Murray, Cedar Rapids
Second Vice-President — Lester C. Kern, Waverly
Secretary — Tom B. Throckmorton, Des Moines
Treasurer — Addison C. Page, Des Moines

COUNCILORS

	Term expires
First District—George B. Crow, Burlington	1930
Second District—David N. Loose, Maquoketa	1927
Third District—Fred F. Agnew, Independence	1931
Fourth District—Paul E. Gardner, New Hampton, Chrm.	1929
Fifth District—George E. Crawford, Cedar Rapids	1928
Sixth District—Samuel T. Gray, Albia	1928
Seventh District—Channing G. Smith, Granger, Secretary	1929
Eighth District—Fred A. Bowman, Leon	1929
Ninth District—Henry B. Jennings, Council Bluffs	1927
Tenth District—Watson W. Beam, Rolfe	1931
Eleventh District—Giles C. Moorhead, Ida Grove	1930

TRUSTEES

Oliver J. Fay, Des Moines, Chairman — 1928
Vernon L. Treynor, Council Bluffs — 1927
John F. Herrick, Ottumwa — 1929

DELEGATES TO A. M. A.

Donald Macrae, Jr., Council Bluffs — 1928
Bert L. Eiker, Leon — 1928
John C. Rockafellow, Des Moines — 1927
William Jepson, Sioux City — 1927

ALTERNATE DELEGATES TO A. M. A.

Thomas A. Burcham, Des Moines — 1928
John F. Herrick, Ottumwa — 1928
Thomas F. Thornton, Waterloo — 1927
Clyde A. Boice, Washington — 1927

STANDING COMMITTEES

Medico-Legal

David S. Fairchild, Sr., Chairman, Clinton — 1927
Henry B. Jennings, Council Bluffs — 1928
Henry C. Eschbach, Albia — 1929

Scientific Work

Thomas E. Powers — Clarinda
Tom B. Throckmorton — Des Moines
Addison C. Page — Des Moines

Public Policy and Legislation

William W. Pearson, Chairman — Des Moines
James F. Edwards — Ames
Thomas A. Burcham — Des Moines
Thomas E. Powers, Ex-Officio — Clarinda
Tom B. Throckmorton, Ex-Officio — Des Moines

Constitution and By-Laws

Vernon L. Treynor, Chairman — Council Bluffs
Charles B. Taylor — Ottumwa
Tom B. Throckmorton — Des Moines

Publication Committee

David S. Fairchild, Sr., Editor — Clinton
Tom B. Throckmorton, Secretary — Des Moines
Oliver J. Fay, Trustee — Des Moines
Vernon L. Treynor, Trustee — Council Bluffs
John F. Herrick, Trustee — Ottumwa

Finance

Ernest C. McClure, Chairman — Bussey
Daniel F. Houston — Burlington
Charles Ellyson — Waterloo

Arrangements

Thomas E. Powers — Clarinda
Tom B. Throckmorton — Des Moines
Addison C. Page — Des Moines
Two members from the Pottawattamie County Medical Society

SPECIAL COMMITTEES

Medical Library

David S. Fairchild, Sr., Chairman — Clinton
Conrad R. Harken — Osceola
Felix A. Hennessy — Calmar

Military Affairs

Donald Macrae, Jr., Chairman — Council Bluffs
Harold A. Spilman — Ottumwa
*Wilbur S. Conkling — Des Moines

Hospital Committee

Walter L. Bierring, Des Moines — 1929
Fred M. Smith, Iowa City — 1928
Frank E. Sampson, Creston — 1927

*Deceased

SOCIETY PROCEEDINGS

Audubon County Medical Society

The Audubon County Medical Society met in regular session here Saturday evening. The meeting was called to order by the president, Dr. W. R. Koob of Brayton. All members were present. After a short business meeting at the office of Dr. R. F. Childs, the members proceeded to the Curtis Cafe, where lunch was served. After lunch they adjourned to the Community building where papers were read by Dr. G. A. May of Des Moines and Dr. L. E. Jensen. The subject of Dr. May's paper was Vertigo as an Aid in Diagnosis. Dr. Jensen's subject was Scarlet Fever. These papers were discussed by members of the society and a general interesting and profitable time was had by all.

J. M. Fulton.

Calhoun County Medical Society

The Calhoun County Medical Society met at Lake City, April 15. There were present visiting medical men from Fort Dodge, Carroll, Jefferson, Sheridan and Omaha. About forty were in attendance.

Following the supper an address was given by Dr. Findley of Omaha.

Cerro Gordo County Medical Society

A clinical meeting of the Cerro Gordo County Medical Society was held Friday, May 21, 1926, at 2:00 p. m., at Mercy Hospital, Mason City, Iowa.

Dr. Edmund Andrews, professor of surgery, College of Medicine, University of Illinois, Chicago, held a clinic on cases of hernia.

At 6:30 dinner was served at Hotel Hanford for members and guests, after which a short business meeting was opened by President C. E. Dakin, at

which time Dr. C. W. Powell of Manly, Iowa, was elected to membership and suggestions made as to business to be considered at next regular session.

Dr. Andrews was then presented and gave a very instructive address on Hernias, demonstrated by lantern slides.

Due to inclement weather, many members of surrounding societies who had accepted invitations and for whom reservations had been made, were unable to attend, although a large number were present.

Dr. E. L. Wurtzer, Sec'y.

Dubuque County Medical Society

The Dubuque County Medical Society held one of their most successful meetings, June 4. Doctor J. C. Bloodgood of Baltimore gave talks on Cancer Diagnosis and Prevention to 100 doctors and dentists of Dubuque and vicinity. His talks were illustrated with lantern slides and specimens from the Finley Hospital museum. In the morning he gave a clinic on Cancer and Pre-cancerous Lesions. In the evening he gave a public lecture which was attended by a large crowd of interested people. The other speaker was Doctor V. C. Graber of Iowa State University School of Medicine who gave a review of Cardiac Decompensation, with special emphasis on prevention. A banquet in the evening was a very enjoyable social feature.

F. P. McNamara, Sec'y.

Grant, Iowa, Lafayette, Crawford and Dubuque County Medical Societies

A joint meeting of the medical societies of Grant, Iowa, Lafayette, Crawford and Dubuque counties was held at Lancaster, Wisconsin, Thursday, May 20 at 2:30 p. m. Following the business session a banquet was held at 6 o'clock. Dr. J. H. Schrup of Dubuque was to discuss the x-ray machine but found it impossible to attend. Dr. E. A. Brooks of Appleton, Wisconsin, gave an address on Post Tonsillectomy; Dr. R. C. Duerke, superintendent of the Wisconsin State Hospital at Madison gave a discussion on the Relation of the State Hospital to the Profession; Dr. R. L. McIntyre of Dubuque on Skin Diseases; Dr. E. R. Schmidt, dean of surgery at the University of Wisconsin, delivered an address.

Ringgold County Medical Society

The Ringgold County Medical Society met Wednesday, May 26, at the assembly room of the library in Mount Ayr.

The meeting was called to order by president Dr. S. W. DeLong. The doctors present were: S. W. DeLong; J. W. Hill; W. W. Hansell, A. P. Stoner, Des Moines; E. T. DeWitt, Ellston; T. E. Powers, Clarinda; C. H. Mitchell, F. A. Bowman, Leon; C. T. Lesan, E. J. Watson, Diagonal; Caryl Potter, St. Joseph, Missouri; Enos Mitchell, Grand River; H. M. Mills, T. W. King, Lamoni; G. P. Reed, Davis City; O. L. Fullerton, Redding; J. D. Shirley, Osceola; J. H. Gassen, Bedford; Samuel Bailey.

The program was as follows:

Surgery of the Face and Neck for the General Practitioner, by Dr. Caryl Potter, St. Joseph, Missouri.

Urology for the General Practitioner, by Dr. W. W. Hansell, Des Moines.

Address by Dr. C. E. Powers, Clarinda, president of the State Medical Society.

Address by Miss Frances B. van Zandt, librarian, State Medical Library, Usefulness of the State Medical Library.

Complimentary resolutions were unanimously adopted, thanking Miss van Zandt, Dr. Powers, Dr. Potter and Dr. Hansell for their presence and entertaining and instructive addresses.

S. Bailey, Sec'y.

Sac County Medical Society

The Sac County Medical Society held its annual meeting Thursday evening, April 22. Dinner was served at the Hotel Park and officers were elected for the ensuing year as follows: President, Dr. Guy H. Swearingen, Sac City; secretary, Dr. James McAlister, Odebolt; treasurer, Dr. J. H. Stalford of Sac City.

Wright County Medical Society

Wright County Medical Society met at Belmond, April 20. Fourteen physicians were present. Dr. G. H. Steele of Belmond read a paper on Scarlet Fever. This was the regular monthly meeting of the society.

Four-County Medical Society

A meeting of the Four-County Medical Society, comprised of Plymouth, Cherokee, Ida and Buena Vista met in Cherokee May 7. The program was as follows:

Dr. Troy Swallum, Sioux Rapids, A Case of Tumor of the Anterior Pituitary Body.

Dr. A. H. Bullock, Cushing, The Chronic Case.

Dr. W. L. Downing, Le Mars, Prostatic Disease.

Dr. John Peck, Des Moines, Special Talk on Diseases of the Lungs.

Dr. M. M. Myers, Des Moines, Special Talk on Disease of the Heart.

Upper Des Moines Medical Society

The Upper Des Moines Medical Society met at Emmetsburg April 29. Papers were read by Dr. J. H. Knipe of Armstrong, Dr. F. L. Knowles of Fort Dodge, Dr. H. W. Scott of Fort Dodge and Dr. H. L. Brereton of Emmetsburg.

The officers of the Society are Dr. H. L. Brereton, president; Dr. N. T. Morton, secretary, and Dr. J. W. Hennessey, chairman of the entertainment committee.

Upper Des Moines Medical Society

At a recent session of the Upper Des Moines Medical Society a committee was appointed to arrange for a meeting of the association at the

Casino, Terrace Park, Lake Okoboji. Drs. H. O. Green of Spencer, Q. C. Fuller of Milford, and myself were named as the committee. Drs. H. A. Powers and H. L. Brereton of Emmetsburg, advisory.

Time: August, dates most agreeable for those on program.

Purpose: Post-graduate instruction for general practitioners.

Attendance: Physicians of northwest Iowa, 10th and 11th Congressional Districts, to be especially invited and the profession of the state generally (ladies included).

Program: Two days, 9:00 to 12:00 a. m., 1:30 to 5:00 p. m. Men of note to cover as nearly as possible the entire field of diagnosis and treatment, having in mind a more or less definite line of demarcation between general and special diagnosis and treatment; no formal discussion but opportunity offered to ask questions relating to the subject of paper.

Two evening sessions, one with banquet followed by addresses by eminent men to which the public will be invited; the other evening addresses to public and profession, followed by entertainment; both evenings to be devoted to dancing or other amusement following the set programs.

N. B.—It is conservatively estimated that the summer population at the lakes is more than 30,000 representative citizens from all over this and adjoining states are there to be entertained; they have no objections to instruction. We believe we can furnish an audience that will be inviting to outstanding men who are concerned for the welfare of both the public and the profession. The lure of the lakes in addition to the program should make the meeting particularly attractive. The Casino will seat more than one thousand people.

The undertaking just launched is meeting with unexpected approval on the part of physicians throughout the territory and the building of the program is progressing smoothly.

On behalf of the committee you are earnestly requested, either alone or in conjunction with Hon. C. M. Dutcher, to present the medico-legal phases of the practice of medicine.

Any suggestions you may have to offer in the way of making the meeting the success it is intended to be for all concerned will be greatly appreciated.

E. E. Munger, Spencer, Iowa.

Iowa Heart Association

The second annual meeting of the Iowa Heart Association was held at the Fort Des Moines Hotel, May 14. The meeting was opened with a luncheon presided over by Dr. Walter L. Bierring. The speakers were Dr. Paul D. White, Boston, on The Conservation of Hearts; Dr. Fred M. Smith, Iowa City, The Future of Heart Work in Iowa. Dr. Merrill M. Myers, Des Moines, reported the year's work.

Dr. Myers presided at the business meeting. Election of officers as follows: President, Dr. Merrill M. Myers, Des Moines; vice-president, Dr. Fred Smith, Iowa City; secretary, T. J. Edmonds, Des Moines.

Executive committee: Dr. Walter L. Bierring, Des Moines; Dr. W. H. Rendleman, Davenport; Dr. V. L. Treynor, Council Bluffs; Dr. P. W. Van Metre, Rockwell City; Dr. L. F. Woodward, Mason City. Ex-officio: Dr. Don M. Griswold, state health commissioner; Dr. John H. Peck, president Iowa Tuberculosis Association.

Nominating committee: Dr. F. E. Sampson, Creston; Dr. Thomas E. Burcham, Des Moines; Dr. E. T. Edgerly, Ottumwa.

The Dallas Session of the A. M. A.

When Dallas, Texas, was selected as the place of meeting for 1926 it seemed too far away to bring a large gathering of medical men but it proved that all these pessimistic prophecies were untrue. Nearly 4200 physicians registered at the session.

In the House of Delegates the work was of a constructive nature and several important matters were freely discussed. The election of officers resulted as follows:

President Elect, Jabez N. Jackson, Kansas City, Missouri.

Vice-president, John O. MacReynolds, Dallas, Texas.

Secretary, Olin West, Chicago, Illinois.

Treasurer, Austin A. Hadyn, Chicago Illinois.

Speaker of the House of Delegates, Frederick C. Warnshuis, Grand Rapids, Michigan.

Vice-speaker of the House of Delegates, A. H. Bunce, Atlanta, Georgia.

Trustees, Charles W. Richardson, Washington, D. C.; Joseph A. Pettie, Portland, Oregon; J. H. J. Uphan, Columbus, Ohio; Rock Sleyster, Milwaukee, Wisconsin.

Washington was selected as the place for holding the next annual session, May 16-20, 1927.

Meeting of the Minnesota State Medical Society

The following officers for 1927 were elected:

President, Dr. W. F. Braasch, Rochester; first vice-president, Dr. H. B. Aitkens, Le Suer Center; second vice-president, Dr. S. H. Boyer, Duluth; third vice-president, Dr. F. D. Gray, Marshall; secretary, Dr. E. A. Meyerding, St. Paul; treasurer, Dr. Earl B. Hare.

Pioneer Exhibit at the Seventy-fifth Annual Convention of the Iowa State Medical Society

Dr. C. A. Boice of Washington, Iowa, won with a display of old books, saddle bags and instruments which had been collected from the equipment used by several pioneer Washington county physicians. One of the books displayed by Dr. Boice was a copy of the first volume of surgery printed in the United States and a microscope, one of the earliest French instruments.

The committee consisted of Drs. D. S. Fairchild, Allen Pusey and Lewis Schooler.

UPPER DES MOINES MEDICAL SOCIETY

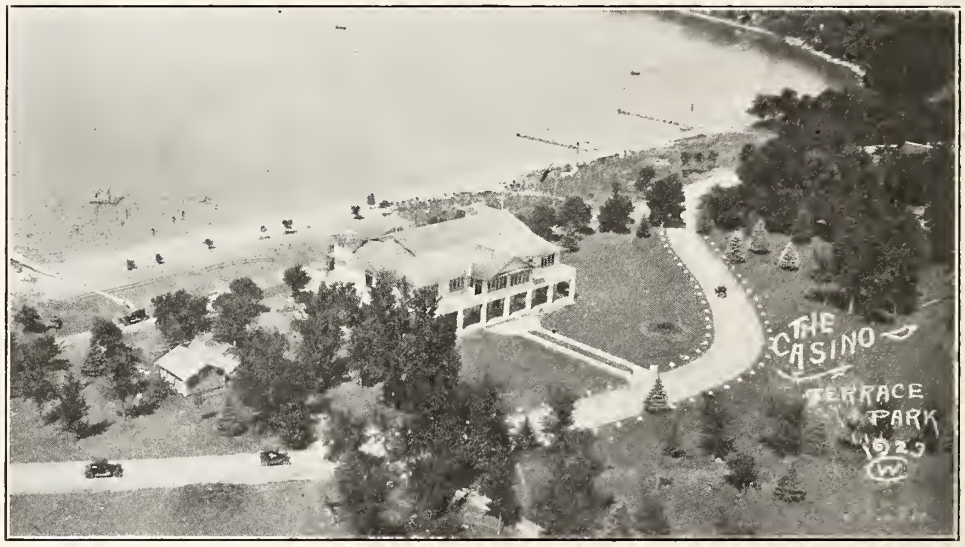
The Upper Des Moines Medical Society will hold its annual meeting at the Casino, Terrace Park, Lake Okoboji, on Tuesday and Wednesday, August 17 and 18, 1926.

Purpose: Post-graduate instruction for general practitioners.

Program: The several divisions of medicine and surgery will be represented by well-known, able physicians and surgeons, from universities and private practice, who bear a reciprocal relation to the district.

Hours: 9:00 a. m. to 12:00 m., 1:30 to 5:00 p. m. Two evening sessions; on the 17th banquet for the profession and ladies; on both evenings there will be addresses by outstanding men, open to the public, followed by entertainment and dancing into the wee-sma' hours. Physicians of the tenth and eleventh congressional districts are especially invited and urged to be present; the profession generally of Iowa and neighboring states are most cordially invited (ladies included).

Full program in August Journal.



MID-SUMMER MEETING OF THE AUSTIN FLINT-CEDAR VALLEY MEDICAL SOCIETY

Mid-summer meeting of the Austin Flint-Cedar Valley Medical Society will be held Tuesday and Wednesday, July 13 and 14, 1926, at Fort Dodge, Iowa.

Officers—Dr. J. McDannell, Nashua, President; Dr. C. H. Cretzmeyer, Algona, vice-president; Dr. W. E. Long, Mason City, treasurer; Dr. L. R. Woodward, Mason City, secretary.

The program will be as follows:

Tuesday, July 13
10:00 a. m.

Breast Tumors—Dr. E. M. Keister, Fort Dodge.

Encephalitis—Dr. A. S. Hamilton, Minneapolis, Minnesota.

Appendicitis With Especial Reference to Differential Diagnosis—Dr. L. C. Kern, Waverly.

1:00 p. m.

Medical Clinic: Neurological Cures—Dr. A. S. Hamilton, Professor of Nervous and Mental Diseases, University of Minnesota, Minneapolis, Minnesota.

Treatment of Intra-Abdominal Injuries Due to External Violence—Dr. G. T. McCauliff, Webster City.

Diagnosis of Tuberculous Ulcers of the Bowel—Dr. J. T. Strawn, Des Moines.

Right Sided Abdominal Pain—Dr. A. A. Schultz, Fort Dodge.

Intestinal Obstruction—Dr. J. E. Brinkman, Waterloo.

Tuberculosis of the Appendix—Dr. T. J. Irish, Forest City.

Wednesday, July 14
8:00 a. m.

Therapy, New and Old—Dr. J. M. Garret, Fort Dodge.

Goiter—Diagnosis and Treatment—Dr. L. T. Curry, Waterloo.

Torsion of the Normal Uterine Adnexa—Dr. E. D. Allen, Hampton.

Relief of Hypertension by Diatherma—Dr. H. D. Holman, Mason City.

Prognosis—Diseases of the Heart—Dr. M. M. Meyers, Des Moines.

Indications for Intervention in Acute Mastoiditis—Dr. F. H. Fillenworth, Charles City.

President's Address—Dr. J. McDannell, Nashua.

Business Session.

1:00 p. m.

Dermatological Clinic—Dr. J. H. Mitchell, Assistant Professor Dermatology, Rush Medical College, Chicago.

The Use of Acidified Milk—Infant Feeding—Dr. L. F. Hill, Des Moines.

On the Management of Diabetes—Dr. C. H. Graening, Waverly.

The Specific Treatment of Tuberculosis—Dr. J. W. Kime, Fort Dodge.

Scientific sessions and clinics will be held in the Chamber of Commerce Rooms in the Armory on First Avenue North.

Banquet and dance at the Country Club at 6:30 p. m. on Tuesday evening, July 13.

Speaker at banquet, Mr. J. R. Files of Fort Dodge.

Mrs. C. J. Saunders has charge of the entertainment for the ladies. There will be a bridge tea at the Country Club on the afternoon of July 13. At this time plans for Wednesday will be made.

ANESTHETISTS MEET

The annual meeting of the Mid-Western Association of Anesthetists will be held October 11-14, 1926, in Kansas City, Missouri, at the same time as the Clinic Week there. Headquarters, Baltimore Hotel.

An interesting and attractive program is in the process of making. Any physician or dentist desiring to read a paper should send the title of his paper to the secretary very soon.

Ralph M. Waters, M.D., secretary-treasurer, 425 Argyle building, Kansas City, Missouri.

MAIL DIRECTORY INFORMATION CARD PROMPTLY

During the month of June, every physician in the state should have received a directory information card. Every one is urged to fill out and return the stamped card regardless as to whether he or she has changed their residence or office address.

This information will be used in compiling the tenth edition of the American Medical Directory, now under revision in the Biographical Department of the Association. The directory is one of the altruistic efforts of the association and is published in the interest of the medical profession which means ultimately in the interest of the public. It is a book of dependable data concerning the physicians and hospitals in the United States and Canada.

American Medical Ass'n.

PERSONAL MENTION

Dr. Gerald V. Coughlan, formerly of Glenwood, has moved to Council Bluffs. Dr. Coughlan graduated from the Creighton Medical College in 1913. From January 1 to April 10 in 1916 he took postgraduate work at Johns Hopkins Hospital, Baltimore.

Dr. T. E. Powers has been appointed by Governor John Hammill on a committee to attend the World Conference on Narcotic Education to be held July 5 to 10 at Philadelphia.

Dr. A. C. Moerke was relected president of the teaching staff of the training school of the Burlington Hospital at the regular staff meeting on May 27.

Dr. J. A. Butin has severed his connections with the Dubuque Medical and Surgical Clinic, 1200 Main street, and with his wife will leave soon for Chanute, Kentucky, where he intends to enter the general practice.

It is announced that Dr. R. E. Savage will leave Panora on June 1 to locate at Webster City, where he has purchased the practice of Dr. G. H. Ritenour. Dr. Savage came to Panora in January, 1919, following his discharge from the army, having been graduated from the University of Iowa the previous year.

Since the death of Dr. M. F. Stultz, Wiota has been without a physician. Dr. Harry Hall of Butte, Montana, has taken over the office and practice of the deceased physician. Dr. Hall had two years at Drake University, finished his course and received his diploma at Rush Medical College, Chicago.

Dr. O. H. Peterson who has been located at Lamoni for a number of years sold his practice to Dr. C. E. Sixbury, a graduate of the State University at Iowa City. Dr. Peterson will go to Iowa City, July 1, having a position as assistant to Dr. L. W. Dean.

The president has reappointed Major General M. W. Ireland as surgeon-general of the United States Army, and the nomination was confirmed by the senate, April 8.

Dr. Charles J. Drueck, Chicago, gave an illustrated lecture before the Linn County Medical Society, Cedar Rapids, May 20, on Practical Proctology.

MARRIAGES

Dr. W. P. Hoffman of Davenport and Miss Marie Burnette of Lost Nation were married at the Sacred Heart Cathedral, Davenport, May 18. The bride is a graduate of the Immaculate Conception Academy, Davenport and the groom is a graduate of the University of Iowa Medical School and has for the past six years been practicing in Davenport.

The future home of Dr. and Mrs. Hoffman will be Camp McClellan, Davenport.

Dr. Granville Allison Bennett of Iowa City and Miss Lenora Webber of Davenport were married May 15.

OBITUARY

Dr. Alfred O. Williams, oldest practicing physician in Ottumwa, died at 10:40 Friday evening, May 28, at his home 216 North Jefferson street, after an illness of two months. He was seventy-five years old.

Dr. Williams was born November 6, 1850 at Nauvoo, Illinois. He received his A. B. degree in 1873 and M. D. degree in 1875. He began practicing in Ottumwa in 1876. He was one of the founders of Wapello County Medical Society and has brought fame to Ottumwa through affiliation with state and national medical associations. He was at one time president of the American Association of Railway Surgeons. Dr. Williams was surgeon for the C. B. & Q. and Rock Island railroads for nearly fifty years. He was also acting physician for the Ottumwa Railway & Light Co.

He was married June 8, 1880 to Miss Jeannette C. Warden and they have since lived at the home on

Jefferson street. Besides his wife, he is survived by the following daughters, Miss Bessie Williams, Miss Virginia Williams and Mrs. Carl Spry.

An Eulogistic Sketch of the Late Doctor A. O. Williams, Ottumwa, Iowa

If it were reserved for the present age to produce a rare example of a medical man that honor certainly descended upon the subject of our sketch, embracing as he did a combination of temperaments rarely seen in an individual; poetic, artistic, literary, and yet, his mathematical proclivities were such as to enable him to grapple with any of the intricate problems of his time, disposing of same with an alertness of mind that called forth admiration. His wonderful faculty of seizing a subject, juggling with it, as it were, in his own carefully chosen words often carrying it to celestial heights, was heard with rapt attention.

Many years ago, when speaking on Homer and the wonderful ideation of his verse, he arose to a sublime pitch; a little over a month ago upon his death bed he gave us a dissertation one morning on Socrates and Sleep.

This may give our readers some thought of the scholarly channel in which his mind ran. In discussing a hypothetical question, he would occasionally deviate from the well hackneyed and academic style, playing with his subject and with the language in a way that was entirely his own; while at the same time we all knew he was thoroughly conversant with the concord of subject and verb, the split infinitive, and the beauties of English construction.

To a superficial observer he was sometimes spoken of as "rough". Be that as it may; we all know the finest diamond ever cut was once in the rough. The beautiful peach was once a bitter almond; the cauliflower is but a cabbage with a college education. Yes, I fear we were all "rough" at one time, and some of us even now.

And yet, there was always a smoothness, a delicacy, in his splendid thought and a finesse in his mannerisms that gave him the stamp of a true scholar and gentleman. He was never converted to mere traditionalism in any form; he was rather iconoclastic, often smashing stilted tales of the great heroes of history, men and their dogmatisms. It made little difference what sentiment said about the rainbow, aurora borealis, or the Einstein theory; once having read either he was back at us with remarks of approval or denunciation, and could always give us reason for the faith within him; thus clinching his argument as he went. He had a fine, analytical mind, a mind of geat reach and power united with an academic education and extensive reading which gave him a cosmopolitan background.

His character, honesty and integrity, his every act would bear the light of day. This rare combination of attributes applied as he applied them worked wonderfully to elevate the profession, and to stimulate the younger members to higher aspirations. In our brief narration, should we fail to mention his numerous qualifications, let us not forget to say that he never abused a brother practitioner and when we were abusing ourselves at a society meeting he was always quick on the trigger with some form of humorous invective for one and a stinging eulogy for the other. And thus he kept us together as a good shepherd keeps his flock. He had a keen sense of humor, with a sparkling effervescence that never failed to keep the society free from lethargy. And yet, in studying a case, he was never in any

DR. A. O. WILLIAMS

sense superficial; and had that faculty of going to the bottom and down to basic causes as quickly as any one we ever met.

He was truly one of the most influential members of the profession, and was in no sense a mere "recapitulator" but always original in thought and its application to the subject under discussion. He was upright, so much so he almost leaned backwards; certainly too much sometimes for his own good. Had he lived his professional life in New York City he would have arisen equal to his surroundings and environment.

He was a member of most of our local, state and national societies; greater still, he was one of the grand patriarchs of the profession. He held numerous society offices from secretary to the president; was also surgeon to many industrial concerns, serving almost fifty years as surgeon of the Chicago, Burlington & Quincy and Rock Island Railroads.

Charles E. Huband.

"Whereas it has pleased an Omnipotent Providence to call from among us a beloved member of our profession, one who through years of constant association, we have learned to love and esteem; and

one whose loss to us and the community is irreparable; therefore, be it

"Resolved, that we extend our sincere sympathy to the bereaved members of his family, with the assurance that their loss is shared sincerely by each and every member of our society, and be it further

"Resolved, that these resolutions be sent to the family, also entered in the records of our Society, and a copy be sent to The Ottumwa Courier for publication."

S. A. Spilman, M.D.,
Chas. B. Taylor, M.D.,
Charles E. Huband, M.D.

Dr. W. S. Conkling died at his home in Des Moines, Friday, June 11, 1926, after a sickness of nearly a year, which no doubt had a certain relation to his strenuous war service in France. Dr. Conkling was a leading physician and surgeon in Des Moines and citizen of great influence. His services have been so important that generous space will be accorded him in a future number of the Journal.

Reuben F., son of Joseph G. and Lucinda Eldridge, was born at Philadelphia, Pennsylvania, March 21, 1858 and died at the Hospital in Perry, Iowa, January 3, 1925, at the age of sixty-seven years, nine months and thirteen days. His death followed a stroke, resulting from an auto accident, which occurred Sunday morning, as the doctor was taking a patient to the M. E. Hospital in Des Moines and also for the purpose of visiting another patient there.

While yet a small lad he, with his parents, moved to Blair, Nebraska. There, he obtained his public school education, receiving his high school diploma at the age of sixteen years.

Soon after this, he joined the army, remaining in the service but a short time, when his discharge was secured by his parents, who wished him to continue his education.

He entered the University at Iowa City, there completed his medical course, receiving his degree as M.D. in May, 1882. The following June he was married to Lizzie Joy at La Hunta, Colorado. To them were born four children, Madge, Joe M., Waldo E. and Minnie.

He practiced medicine at La Hunta for two years, afterward he was at Bridgeport, Perry, and Jamaica. At this time he suffered a nervous breakdown, and endeavored to give up the practice of his profession for a time, so he came to Dawson, Iowa, in 1887 and engaged in the tile business for a time. But with returning health, and at the insistence of his former patients, he resumed his chosen work, becoming a busy, skillful and much loved physician.

July 1, 1917 he was united in marriage with Sarah Cummins Marks, a graduate nurse, who, because of her profession, as well as her many lovable qualities, was an inspiration and a great help to him in his ever increasing practice.

Dr. Eldridge was a 32nd degree Mason, and also a member of the M. W. A. and the I. O. O. F.

In passing, he leaves, his wife, a son, Waldo E. of Amarillo, Texas; two daughters, Mrs. Madge Broadie of Mason City, Iowa, and Mrs. Minnie Thomas of Marengo, and three grandchildren, Margaret and Ursula Thomas, Ora Alfred Broadie.

He also leaves an only and much beloved sister, Mrs. Madge Herman, of Wilkesbarre, Pennsylvania.

In 1918, Joe M. his eldest son, died at Madison, Wisconsin, while in Chemical Warfare Service. The doctor felt this loss keenly, the more so, perhaps, because at the time, his other son was in France, in the service of his country.

A little granddaughter, Betty Thomas, died in 1924.

For almost forty years, Dr. Eldridge has been identified with Dawson and community, a leader of every good work, a liberal giver to the church and to charity.

No one ever asked help of him in vain, there was no night too stormy, no road too nearly impassible, no patient so poor, as to be refused the benefit of his skill. He asked not "How large the fee?" but "How may I best serve?"

Dr. Lafayette W. Case died recently at Pasadena, California. Dr. Case and his family came to Waterloo from Chicago in 1887. In 1916 he moved to Colorado Springs and was visiting in Pasadena when he died.

Dr. Case was graduated from Rush Medical College, Chicago, in 1870. He was lecturer in chemistry, which position he held for five years. He was then transferred to the chair of dermatology, which position he held until April, 1885, when he retired to engage in private practice.

Shortly after graduation Dr. Case was appointed physician to the North Chicago Dispensary and was in that position in 1871 at the time of the great fire. He secured a corner of the Newbury school at the limits of the burned district and opened a free dispensary for the victims of the fire.

Dr. Case was a member of the Chicago Medical Society and the Medico Historical Society. He became editor of the Chicago Medical Examiner. His duties were to translate articles from French and Italian medical journals for the abstract department.

During the last twenty years he devoted himself almost entirely to genealogical work which for some years previous he had devoted his leisure time.

Dr. F. C. Carle of Garrison died from a stroke of apoplexy on Saturday, May 15 at 12:20 a. m., at the age of fifty-four years. He had practiced in Garrison twenty-two years. Dr. Carle was born near Urbana, June 28, 1872. After attending Tilford Academy at Vinton he entered the Iowa State University. After completing his medical course he located in Garrison in 1904. In October of the same year he married Miss Georgia Wilson of Well-

man, Iowa, who died the following June. He later married Miss Maude Dick of Denver, Colorado, in 1909. Mrs. Carle died as the result of burns received when an oil stove exploded. Dr. Carle was again married on June 14, 1911 to Miss Lillian Herger.

Dr. Maurice Hanson of Osage died Monday, May 10, at Rochester, Minnesota. Dr. Hanson was visiting in Albert Lee, Minnesota.

Dr. J. H. Lowrey died Wednesday night, May 19, at St. Mary's Hospital, Rochester, Minnesota. Dr. Lowrey has been in active practice in Neola for nearly forty years.

Dr. R. Parkinson Morden, a resident of Iowa for sixty years, died Thursday, May 20, at Polyclinic Hospital. He was eighty-five years old and had lived in Des Moines twenty years. Four of his children are doctors: Dr. Leone Scruby of Des Moines, and three sons, Dr. R. B. Morden of Jefferson, Dr. R. R. Morden of Des Moines, and Dr. R. O. Morden of Minneapolis.

Dr. H. C. Dunlavy of Shelby met with a fatal accident near Missouri Valley on Sunday, April 18. He was taken to the hospital at Blair, Nebraska, and died the next morning.

Dr. Dunlavy was born in Davis county, Iowa. He settled first at Irwin, some months later he moved to Shelby.

Dr. A. W. Cook of Wheatland, died at Jane Lamb Hospital, Clinton, May 26.

Dr. Cook was graduated from the Keokuk Medical College thirty years ago. After graduation he located at Wheatland where he was born. Doctor Cook was fifty-nine years old.

Doctor C. T. Brown, physician and surgeon of Cedar Rapids, died suddenly from a paralytic stroke, while making his rounds at St. Luke's Hospital, September 3.

Dr. Brown was born on a farm near Springville, Iowa, Linn County, August 1, 1866. He was graduated from Cornell College in the Department of Civil Engineering in 1892. Later he entered Iowa State University as a medical student, but after two years entered the Chicago Homeopathic Medical College from which he was graduated in 1896.

He began practice in Tipton, later moved to Waverly, and finally located in Cedar Rapids in 1909.

Dr. Brown was a member of Linn County, Iowa State Medical Society, and of the American Medical Association. He was also a member of the Masonic Lodge, Appollo Commandery.

Dr. Brown did his work conscientiously, and well, both in his profession and the community activities which he supported.

He was genial, ready and willing and in the twenty-eight years in which he practiced made many friends.

He has been a working member of the Methodist Church since young manhood. In Cedar Rapids he was especially interested in "Boys' Work"—both in St. Paul's Methodist Church and the Y. M. C. A.

Dr. Brown was united in marriage to Miss Irene Chaffee in 1893, and was the father of three children; twin daughters, Florence and Eleanor, and a son, Richard.

He is survived by his wife; his daughter, Mrs. George F. Leo; his son, Richard, and a sister, Sara A. Brown; his daughter, Eleanor, having preceded him in death.

Dr. Brown died as he would have wished—in the full tide of work and interest.

George E. Crawford,
Councilor, Fifth District.

The Traer community was shocked and pained Wednesday morning by news from Iowa City of the sudden death of Dr. J. A. Pinkerton. Death, due to heart disease, came suddenly and without warning while the doctor was seated at a table in a restaurant in Iowa City shortly after 7 a. m. With him were his son, Volney, and Ralph Logan of Traer, both students at the State University. Dr. Pinkerton went to Iowa City Monday to attend a medical clinic at the University, which was attended by physicians and surgeons from all sections of the state. He had attended a banquet for the visiting doctors the night before, and lodged at a fraternity house where his son resides. That morning he walked ten blocks from the fraternity house to the restaurant with the two students. The party had just given their breakfast order to a waiter when the doctor was stricken. He died almost instantly. The son, Volney, sent for Dr. O'Keefe, a Waterloo physician and intimate friend of Dr. Pinkerton, who was stopping at the Jefferson Hotel. Dr. O'Keefe was on the scene in a few minutes, but was too late. Drs. Crabbe and Farnham of Traer entered the restaurant for their breakfast just behind Dr. O'Keefe, only a few minutes after Dr. Pinkerton was stricken.

Dr. Pinkerton had had a few attacks of heart trouble of late months. He continued his daily practice of medicine, however. The past six months of continuous bad roads in north Tama undoubtedly taxed his strength and hastened his death.

Dr. James A. Pinkerton practiced medicine forty years, nearly all of which were spent in Traer. He was a son of Mr. and Mrs. W. B. Pinkerton, early settlers of this community. He was born in Johnson county, Iowa, the county in which he died, November 12, 1860. His birthplace was a farm near the village of Tiffin. When he was two years of age his parents and family located on a homestead just over the Buckingham line in Blackhawk county. Dr. Pinkerton was reared on a farm, and attended the old

Bull Academy in Traer in his youth, from which he was graduated. He then entered the State University at Iowa City, completing the medical course in June, 1886. He worked his way through college by teaching, and boarded himself. During the summer vacations he studied medicine in the office of Dr. Morison, an early day practitioner here. With the exception of a year and a half at Mooreville and two years in Waterloo, all of Dr. Pinkerton's long practice was in Traer. During his forty years as a doctor he has been the family physician, counselor and friend of hundreds of families who regard his death as a personal loss. He has also been a civic leader, and throughout his residence here has always been ranked as one of the outstanding and successful business men of Traer. His was an untiring devotion to duty. He took an active interest in community affairs and supported the better things of life.

Dr. Pinkerton married Alice Barbour, also of pioneer parentage. The couple have both given Traer unselfishly of their time and talent.

As a physician, Dr. Pinkerton was widely known over the state. He was a member of medical societies and kept in touch with the progress in his profession. He was a contributor to medical magazines, and a recent issue of the Journal of Iowa State Medical Society has an article from his pen. He maintained an active interest in the State University, and had planned to attend a reunion of his class in Iowa City within a few days.

Besides the wife and adopted son, Dr. Pinkerton is survived by his older brother, Andrew, of Waterloo, and a sister, Mrs. Cora Loung of Los Angeles, California. Two sisters died in infancy and a brother in youth. A sister, Mrs. W. T. Noll, died five or six years ago at Clinton, Missouri.

The funeral service at the home at 3:00 o'clock this afternoon will be private and simple. Those who will attend by invitation will include Traer business men, intimate friends and neighbors, the Traer physicians and members of the Tama County Medical Society, and a number of friends and relatives from a distance. There will be no funeral or eulogy. The service will consist of the reading of the fourteenth chapter of St. John and prayer. The only music will be a vocal selection, "Eventide", by Rev. J. J. G. Graham. The pallbearers will be Dr. O'Keefe, Waterloo; Drs. Crabbe, McLeod and Byrnes of Traer; Dr. W. C. Wagner, Dysart; and Dr. J. H. Nauerth, Lakefield, Minnesota.

Mrs. Naureth arrived Wednesday night. It is expected J. T. Rose, also of Lakefield, a former Crystal township boy and a business partner of Dr. Pinkerton here a few years, will also attend.

The funeral will be conducted by Rev. Graham and Rev. Frank Moore, the latter of Manchester, Iowa, a cousin of Dr. Pinkerton. Buriel will be in Buckingham cemetery.

George E. Crawford,
Councilor, Fifth District.

BOOK REVIEWS

CHEMICAL PATHOLOGY

A Discussion of General Pathology from the Standpoint of the Chemical Processes Involved. By H. Gideon Wells, Ph. D., M.D., Professor of Pathology in the University of Chicago, and in the Rush Medical College, Chicago. Fifth Edition, Revised and Reset. Octavo of 790 Pages. W. B. Saunders Co., 1925. Cloth $8.50 Net.

The work of Professor Wells is so well known that an extended review seems hardly necessary. The first edition appeared eighteen years ago. At that time Dr. Wells deplored the fact that pathologists seldom attacked the problem of metabolic changes by chemical methods. Since then conditions have changed as marked by new editions of his book which have appeared in something like five year periods, each time bringing new chemical knowledge.

In this the fifth edition, the author has rewritten, added to and changed the contents of his book to include the advances that have occurred in the last five years.

FACTS ON THE HEART

By Richard C. Cabot, M.D., Professor of Medicine and Social Ethics, Harvard University; Octavo of 781 Pages With 163 Illustrations. W. B. Saunders Company, 1926; Cloth, $7.50 Net.

Dr. Cabot, one of the most careful of living clinicians, says almost at the beginning of this remarkable book "Most heart disease is imaginary", and presents a short argument in support of this statement.

But the main purpose of the author is to begin at the post-mortem room and trace backwards to the clinic room the conditions and symptoms revealed in the records of the case, a difficult and painstaking process but has the advantage of accuracy, quite different perhaps from proceeding from the clinical findings and history of a case which come finally to a necropsy. In a thorough study of heart disease if we begin at the clinic room and proceed to the end, and then check up by following Dr. Cabot's method backward from the necropsy guided by a careful analysis of the records to the beginning, results may be secured which would appear to eliminate error. Dr. Cabot in his book reviews 4143 lesions in 1906 cases of cardiac disease.

After eliminating imaginary or pseudo-heart disease the author presents his first table of material for study under heads A and B. A—Total cardiovascular lesions 4143 in 1906 persons (out of 4000 necropsied from 1896 to 1919). B—All cases showing cardiac hypertrophy and dilatation 1209 cases, all cases without hypertrophy and dilatation, 698 cases.

In this table sixteen divisions of pathologic changes are found. From this post-mortem data the book is made up following backward through the

records to the beginning of the case. Dr. Cabot and his numerous assistants read and reread the records to eliminate all possible errors. It is not necessary to state that a great amount of labor was expended in furnishing to the profession an immense accumulation of data for an accurate knowledge of diseases of the heart. Certainly no student of diseases of the heart can afford to be without this book.

SOME FUNDAMENTAL CONSIDERATIONS IN THE TREATMENT OF EMPYEMIA THORACIS

By Evarts A. Graham, A.B., M.D., Member of Empyema Commission, U. S. Army; Professor of Surgery, Washington University, School of Medicine; Surgeon-in-Chief, Barnes Hospital and St. Louis Children's Hospital. Illustrated. The C. V. Mosby Company, St. Louis, 1925.

This essay was awarded the Samuel D. Gross prize of the Philadelphia Academy of Surgery in 1920. It will be recalled that during the war in 1917-1918 an epidemic of haemolytic streptococcus infections of the respiratory tract, associated with empyema occurred in our war camps, at first with a high mortality rate, so much so that our medical officers became greatly interested and established a committee to investigate the situation with relation to treatment and management. Dr. Evarts Graham, in his usual energetic and thorough manner, took up the study of the disease and its treatment which was embodied in the Gross prize essay, which is now after some delay presented to the medical public. It is not necessary to say that this is a valuable contribution.

MASSAGE AND THERAPEUTIC EXERCISE

By Mary McMillan, Supervisor of Aids in Physiotherapy, Medical Corps, U. S. A., 1919-20. Second Edition, Reset; 12 Mo., of 331 Pages with 17 Illustrations. W. B. Saunders Company, 1925. Cloth $2.50 Net.

This book is entitled to considerable attention. In the preface an outline is presented of the circumstances and conditions which led to the publishing of the first edition and the interest that led to the second edition.

It is undoubtedly true that the surgeon and the physician feel that on concluding his purely professional work, his duties end and a full restoration of function fall to other hands or to the processes of nature. The error of this attitude of mind led no doubt to the preparation of the rather extended preface.

The first chapter is devoted to definitions and application of Effleurage; Petrissage; Friction; Tapotement; Vibration; Physiologic and Therapeutic Effects. Chapter two, Movements of Joints, Active and Passive, and in chapter three, Some Physiologic Objects Gained by Massage, including Volkmann's Contracture, Torticollis, Amputations, Synovitis, Bursitis Tenosynovitis and other similar conditions. Commencing with chapter seven, and including chapters eight and nine, Massage in Relation to the Nervous System including various forms of Paralysis.

Chapters ten and eleven, Massage in Cases of Recent Injury, Strains, Sprains, Dislocations, Fractures and other conditions.

Part two relates to Therapeutic Exercises, which includes posture training, spinal curvatures, foot weakness and deformities, etc.

This book is one for serious consideration by physicians and surgeons.

ENZYME INTELLIGENCE AND WHENCE AND WHITHER

By Nels Quevli, Author of Cell Intelligence, the Cause of Evolution. Published by the Colwell Press, Minneapolis, Price, $3.65.

The purpose of this book is set forth on the title page as follows: Illustrating that enzymes and ferments are the ultimate indestructible and invisible units of life and are conscious and intelligent. That these units produce and maintain all living things we see. That our body is a republic established by enzymes coming from the invisible world of life to which we return when we die.

There has always been speculation as to what life is and what the end of life brings and so as the author says he has spent much time and reflection on its mysteries and concludes with expressing his thoughts in writing this book.

MODERN MEDICINE, ITS THEORY AND PRACTICE IN ORIGINAL CONTRIBUTIONS

By Sir William Osler Bart, M.D., F.R.S.; Third Edition, Thoroughly Revised, Re-Edited. By Thomas McCrae, M.D., Assisted by Elmer H. Frink, M.D., Illustrated. Lea & Febiger, 1925. Price, $9.00.

Volume one of the third edition of this important work has appeared under the direction of Dr. Thomas McCrae, professor of medicine in the Jefferson Medical College, Philadelphia. The work and the names of the contributors are so well known it seems hardly necessary to do more than to call attention to the appearance of this new edition.

Sir William Osler had reached the highest place in the field of medicine, not only because of his contributions, but as a teacher also. It was but natural and fit that he should write books to guide physicians in their practice, first as a single volume and later as the editor of Systems of Medicine, which soon found their way into the libraries of forward and progressive physicians the world over. The recent death of Osler has led to Professor Thomas McCrae taking up the work of a third edition which had been arranged for before Sir William's death. The first volume contains Bacterial Diseases—Non Bacterial Fungus Infections—The Mycosis, by dis-

tinguished writers and authorities on the subjects noted.

THE SURGICAL CLINICS OF NORTH AMERICA

Volume V; Number 4; 246 Pages with 54 Illustrations. W. B. Saunders Company. Price Per Clinic Year, February, 1925 to December, 1925. Paper, $12.00; Cloth, $16.00 Net.

This is a Chicago number and contains clinics from twenty contributors. The volume opens with a clinic by Dr. Arthur Dean Bevan, on the Surgery of the Spleen, followed by a clinic at the Augustana Hospital. Dr. Carl Beck presents a clinic at the North Chicago Hospital on Rare Cases of Brain Lesions. Dr. J. Rawson Pennington takes the Open Operation for Anorectal Fistula and presents the Advantages of the Excision Method. Drs. F. B. Moorehead and R. W. Dewey considers in considerable detail Tuberculosis of the Mouth, a subject of much interest and worthy of close reading. A fracture and dislocation clinic is presented by Dr. Golden Lewis McWhorter at the Oak Forest Infirmary Hospital, several cases of particular interest are offered.

We offer these clinics and titles as a fair representation of the contents of this number.

THE SURGICAL CLINICS OF NORTH AMERICA

Volume 6; Number 1; 325 Pages With 136 Illustrations. Price Per Clinic Year, February to December, $12.00 Paper, $16.00 Cloth. W. B. Saunders Co.

This, a Philadelphia number, opens with a "Demonstration of Spinal Anesthesia", by Dr. W. Wayne Babcock, followed by a clinic by Dr. John G. Clark on "Myoma Utri". Dr. L. K. Ferguson presents "Cystogram Studies of Cystocele and Prolapse". Dr. Robert A. Kimbrough, Jr., presents a discussion on "Care of the Gynecologic Patient, Including Methods of Follow Up". Dr. John H. Jopson of Presbyterian Hospital, presents a clinic including several interesting subjects, this is followed by a clinic by Dr. J. D. Elliott, including several important cases.

This number of the clinic is of especial interest in that it contains a considerable variety of subjects represented by leading surgeons of Philadelphia.

THE MEDICAL CLINICS OF NORTH AMERICA

Volume IX, Number 2; New York Number; Octavo of 271 Pages with 24 Illustrations. W. B. Saunders Company, 1925. Price Per Clinic Year, Paper $12.00, Cloth $16.00.

A considerable portion of this volume is devoted to diseases of the heart and arteries and of the kidneys, thus making an unusually valuable number. A fair illustration of its contents may be found in the first two clinics. "Physical Therapy in Chronic Arthritis, Its Uses and Limitations"; by Drs. Russell T. Cecil and K. G. Hansson, and a clinical lecture by Dr. Harlow Brooks, on "Liver Disease Caused by Heart Defects". There are other important subjects considered but those connected with the circulatory and urinary systems seem the most important, which include much of the contents.

A TEXT-BOOK OF MEDICAL DIAGNOSIS

By James M. Anders, M.D., Professor of Medicine, Medico-Chirurgical College. Graduate School of Medicine, University of Pennsylvania; and L. Napoleon Boston, M.D., Associate Professor of Medicine, University of Pennsylvania. Third Edition, Entirely Reset, Octavo of 1422 Pages, 555 Illustrations, Some in Colors. W. B. Saunders Company, 1925. Cloth $12.00 Net.

This great work contains all that can be said on the subject of diagnosis. The authors have at hand a vast amount of material and every facility for conducting examination. Nothing has been left undone, either by the writers or publishers to brings to the attention of the reader the fullest information of methods of diagnosis.

The book is of such a character as to enable the physician, especially the hospital physician to set about a study of a patient with the aid of laboratory and instruments of precision as to work out a diagnosis that would appear to reach a satisfactory result.

METHODS IN SURGERY

Used in the Surgical Divisions of Barnes Hospital, St. Louis Children's Hospital and Washington University Dispensary; Including Outlines for Case History—Taking, Preoperative and Post-operative Care of Patients, Routines, Diets, Etc. By Glover H. Copher, M.D., Instructor in Surgery, Washington University, School of Medicine, Etc. The C. V. Mosby Company, St. Louis, 1925. Price, $3.00.

The purpose of this book is to furnish suggestions to house officers and students of Washington University of Medicine, working at Barnes Hospital and other associated hospitals. An eaxmination of this useful book will at once show the advantages of presenting a course of instruction to house officers in carrying out the essential routine of service of a hospital. The result of keeping before those in direct contact with patients of certain measures that will add materially to the comfort of patients and lessen to a degree the mortality rate. The introduction of such a course must apparently be of great advantage to hospitals in general.

LOCAL ANESTHESIA SIMPLIFIED

By John Jacob Posner, D.D.S., New York, Chief of the Dental Department, Harlem Dispensary, Former Instructor in Oral Surgery, New York Homeopathic Medical College and Flower Hospital; Visiting Dental Surgeon, St. Luke's Hospital, New York; 55 Illustrations. The C. V. Mosby Company, St. Louis, 1924. Price $3.50.

This is essentially a manual on local anesthesia for the dentist and oral surgeon. The illustrations and detailed instruction in the use in local anesthesia renders the book of great value to the dental surgeon. The old method of general anesthesia in operations in the mouth has given place to local anesthesia, and the information presented by this book will simplify the procedure to the great comfort and advantage to the patient.

SOME CANCER FACTS AND FALLACIES CANCER IN CANADA

The cancer problem is of such intense interest in its relation to the public and to insurance companies in particular that Frederick L. Hoffman, consulting statistician for the Prudential Insurance Company prepared two pamphlets, having for their purpose the presentation to the public certain important facts in relation to cancer.

These presentations were in the form of addresses before important associations. Dr. Hoffman's opportunities and vast experiences in statistics, gathering and application, entitles him to a full hearing. Much valuable information may be gathered from a careful reading of these addresses.

THE NORMAL DIET

A Simple Statement of the Fundamental Principles of Diet; for the Mutual Use of Physicians and Patients. By W. D. Sansum, M.S., M.D., Director of the Patter Metabolic Clinic, Department of Metabolism, Santa Barbara Hospital, Santa Barbara, California. Illustrated; The C. V. Mosby Company, St. Louis; 1925. Price, $1.50.

The title of this book fairly represents the contents and is a useful book to be placed in the hands of patients.

THE ARMY BULLETIN

Number Fourteen—Medical Tactics

The Army Medical Bulletin is published from time to time for the general dissemination of information relating to administrative reports, statistics of diseases, medical department training projects and other matters of a medico-military nature to members of the medical department of the army of the United States—regular army, national guard and organized reserves.

REPORT OF THE SCIENTIFIC RESEARCHES ON THE VENEREAL DISEASES

United States Interdepartmental Social Hygiene Board. The American Social Hygiene Association. Prepared by Dr. Edward L. Keyes.

VENEREAL DISEASE INFORMATION

Issued by the United States Public Health Service for the use of its cooperative work with the state health departments.

RABIES

There is altogether too much "street virus"—too many mad dogs running about the city streets and country turnpikes. They carry death and disaster with them.

How terrifying the outlook would be if there had been no Louis Pasteur to show us how to save the lives of people bitten by mad dogs! Not less than a hundred thousand lives have thus been saved—no one can give the exact figures; but Parke, Davis & Co., who have been marketing a modification of the Pasteur vaccine (a modification in the interest of safety), state that they have sold not less than 10,000 full courses of this vaccine, thus saving, according to estimates based on the statistics of untreated cases, at least 3000 lives. It would be safe to say 10,000 but for the fact that, while rabies is invariably fatal, it does not invariably develop from the bite of a rabid animal. The clothing may protect, or the virus may be washed out by the escaping blood. Nevertheless, any such wound is exceedingly dangerous.

The P. D. & Co. brand of rabies vaccine is called Rabies Vaccine (Cumming), because it was Dr. Cumming, of Ann Arbor, Michigan, who discovered the dialyzing method of eliminating the toxicity of rabies virus without impairing its protective properties.

ADRENALIN

In the process of Adrenalin therapy, the chemist's proof that an active principle could be isolated in pure form from the suprarenal gland was only the first step. Commercial production was necessary—another step. And it would have been wonderful indeed if questions of purity, stability, compatibility, etc., had all been mastered at the very outset. It is reasonable to suppose that the manufacturers have endeavored by constant study and experimental research work to make their product as perfect as it could be made. Speculation of this sort is, however, hardly necessary. Adrenalin has kept its good name, and is entitled to the fullest confidence of the medical profession. (See the Parke, Davis & Co. advertisement elsewhere in this issue.)

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THE ROMANCE OF SURGERY*

John B. Deaver, M.D., Philadelphia, Penn.

Man always has been, and, no doubt, always will be the paramount interest of mankind, whether it concerns his relation to his fellow man, as portrayed by the historian and the novelist, or his relation to the unknown Being "whom he was blindly prompted from within to serve", or whether it concern the mysteries of the human body as "the temple of the living God". It is therefore not only in the works of fiction and of the imagination that one need look for drama, but the thread of romance can be traced now running bright, now less bright throughout every aspect of the all-absorbing study of man. That the mysteries of the human body form no exception to this rule is readily seen in the fact that from time immemorial it has been the aim of the student and the investigator to fathom the hidden things, and even down to our own times the revelations they uncover partake of the spectacular, nay almost of the unreal.

In the limited field of surgery this thread of romance can be traced step by step, especially in the unfolding of those formerly hidden lesions to which the human body is liable, and which have been gradually brought into view and to a large extent become amenable to alleviation and sometimes even a cure. Before proceeding, I wish to assure you that it is not my purpose to begin way back at the beginning, but to review some of the circumstances that have supplied the material for the later chapters in the romance of surgery.

An event which marks the early endeavors of the surgeon to relieve abdominal distress and which has a strong flavor of the romantic is McDowell's first operation for the removal of an ovarian tumor. Picture to yourselves, if you can, a country doctor in the year 1809 traveling sixty miles on horseback on a winter's day to see a patient whose strength was being sapped by the ravages of a pelvic tumor. The results of this visit are memorable alike for their far-reaching effect, as for the audacity of a surgeon and the courage of a woman. We next see this woman, on a bleak day in December, 1809, "with her pendulous abdomen resting on the pommel of her saddle" riding those same sixty miles, a two or three days' journey, into Danville, Kentucky, there to submit to the momentous experiment that was to supply the foundation for modern abdominal surgery. The central figures in these two pictures are Ephraim McDowell, the fearless surgeon, and Jane Todd Crawford, the heroic woman. Their story is indeed worthy of the pen of the novelist.

The description of the operation as it has come down to us from the pen of McDowell himself is not without interest both for its extreme simplicity and the apparent unconsciousness of the surgeon of the import of the procedure.

With the patient on a table on her back, an incision was made three inches from the left rectus abdominus muscle and extending for nine inches, parallel with the fibres of the muscle into the abdominal cavity. The tumor was then exposed and was so large that it could not be removed in its entirety. A strong ligature was put around the Fallopian tube near the uterus, and the tumor then cut open. It was found to consist of the ovary and the fimbriated part of the tube very much enlarged. Fifteen pounds of a dirty gelatinous-looking substance were removed, the Fallopian tube was then cut through and the sac extracted, the weight of which was seven and one-half pounds. As the incision was made the intestines popped out upon the table and the abdomen was so completely filled by the tumor that the intestines could not be replaced during the operation, which lasted about twenty-five minutes. The patient was then turned upon her left side to allow the blood to escape, after which the incision was closed with interrupted sutures, the end of the ligature around the Fallopian tube being allowed to protrude from the lower end of the incision. Between every two stitches a strip

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of adhesive plaster was applied, which 'by keeping the parts in contact, hastened the healing of the incision." The usual dressings were applied and the patient put to bed, "a strict observance of the antiphlogistic regimen" being prescribed. When McDowell visited his patient five days later he found her engaged in making her bed. He gave particular directions as to the future care of her health, and twenty-five days after the operation she was again seen seated on horseback traveling those same sixty miles back to her home, where she remained in good health until her death, thirty-three years after the epochal event in surgery in which she had so valiantly figured.

McDowell subsequently performed two similar operations but did not report them until several years later. In fact, the criticism aroused by the procedure may have prevented an earlier publication of the method. The abdomen was always considered as too sacred for the knife and the female generative as the most sacred part of the abdomen. So much so in fact, that in this country the operation was not again heard of until 1821 and abroad the first one of its kind is reported from Germany in 1819, while in England it had not been attempted until 1836 and in France, in 1844.

The successors of McDowell, Dunlap, Peaslee, Kimball and the two Atlees worked hard against the most adverse criticism to remove the prejudice that existed against the operation. Considering the boon that this one procedure has been to suffering mankind does it not seem as though these intrepid pioneers had reversed the proverb and become angels who rushed in where others were afraid to tread?

For the next episode in our romance the scene changes from the Kentucky backwoods to the more cultured atmosphere of the City of Boston, when "hope 'mid deepening stillness watched one eager brain, with God-like will decree the Death of Pain", as on October 16, 1846, in the operating room of the Massachusetts General Hospital, there took place the first public demonstration of the use of ether anesthesia in operative surgery. The central figures of this dramatic event were W. T. G. Morton, a dentist, the anesthetist of the occasion, John C. Warren, the surgeon, and a young man, whose name has not come down to us, willing to submit to the experiment of painless surgery for the removal of a tumor of the neck, just below the mandible. The incision was made and the tumor removed, the patient after returning to consciousness declaring he had felt no pain, although he was aware of the operation, stating that "the stroke of the knife felt like a blunt instrument being passed roughly around his neck."

Contending claims of priority in the use of ether anesthesia have established the fact that Crawford W. Long of Jefferson, Georgia, had antedated Morton by four years, and to him belongs the credit of priority in its use. On March 30, 1842, Long administered ether to one James M. Venable, "till completely anesthetized and then excised a small cystic tumor from the back of his neck". The surprise of the patient on regaining consciousness can well be imagined as he saw the tumor in the hand of the surgeon, while he had not felt as much as a scratch.

It is not surprising that in 1846 Morton in Boston should not have known of Long's discovery in Georgia. Distances at that time were much greater than at present, and the habit of rushing, or being unwillingly rushed into print had not yet become established. Nor is it remarkable that two surgeons should simultaneously and quite independently have come upon the same idea. The horrors of the operating room were such that the desire to reduce pain was ever uppermost in the minds of the operators of those days. Indeed, the idea of an anesthetic had long been conceived, judging by the crude attempts of a former day. It is, however, the final birth of this priceless boon which has the flavor of fiction. It appears that even in those pre-Volstead days a fashionable form of amusement was to produce intoxication by non-alcoholic means. These sprees took the form of nitrous-oxide parties, at which the participants would become gloriously drunk from inhaling laughing gas provided by itinerant lecturers on chemistry after the close of the lecture or entertainment. The fashion spread even to the obscure town of Jefferson, Georgia. On one occasion a group of students begged Dr. Long to give a nitrous-oxide party. In the absence of the material for preparing the gas, Long suggested that sulphuric ether would serve the same purpose. The party proved a great success, and after that, ether frolics became the rage. Long and his friends, the morning after such parties, often found bruises on their bodies, without any knowledge of how they had been received. It was then that the idea came to Long that "ether must have the power of rendering one insensible to pain, and should therefore be available for preventing pain in surgical operations." The fashion of nitrous oxide exhilaration spread even to staid New England. We find that Horace Wells, a dentist of Hartford, Connecticut, discovered the anesthetic powers of nitrous-oxide in much the same way. After an entertainment

given by a popular lecturer on chemistry, he saw a man under the intoxication of laughing gas, injure his ankle without experiencing any pain, and at once concluded that nitrous oxide must be a powerful anesthetic. He proved his case by using it for extracting a tooth of a patient, and afterwards continued to use the gas in his profession of dentistry. Associated with Wells at the time was one Jackson, and it was through the latter that Morton conceived his idea of using ether as an anesthetic. At that time ether was a well-known antidote to relieve the pain and dyspnœa following the use of chlorine gas poisoning Jackson had often used it in that way but it was left to Morton to demonstrate its efficiency in surgery. Thus from the idle frolics of youth the dream of the surgeon was suddenly realized and assumed practical form and shape.

The domain of surgery was now suddenly widened, but the obstacles to successful surgery were by no means as suddenly removed. For with the rapid increase of the scope of operations that followed the introduction of anesthesia, the grim spectre known as hospital gangrene loomed larger than ever before. To route this ogre from his lair and lay him forever low now became the ambition of the surgeon.

Across the waters in a small village in the mountains of eastern France a youth was wavering between art and science in the choice of a career. Fortunately for mankind science won the day, and to a chemist, who had never handled a scalpel, and who had to screw up his courage to witness a surgical operation; who did not even know that it was possible to bore a hole in the skull of animals for experimental purpose and in man for therapeutic purposes, to this man the medical profession owes a debt which they freely acknowledge when they hail Pasteur as their leader "who led them into the kingdom which they longed for but could not have found for themselves".

From his native village of Arbois, Pasteur soon wandered to Paris where he and his cohorts fought night and day to bring the light of the truth to the doubting and stubborn profession of his day, truths which had been revealed to Pasteur in almost as strange, though less frivolous a manner as attended the birth of ether anesthesia. It certainly seems a long way from the study of the diseases of wines and of silkworms to the diseases of man. But as you all know, such were the beginnings of Pasteur's epochal and romantic revelations, whose influence on the welfare of mankind transcends all imagination. Like pioneers of all times, Pasteur was compelled to fight a fierce battle for his contentions. While he was valiantly striving to maintain his position by brilliant and fearless demonstrations of the cause of wound infection, interrupting the discourses of learned doctors, as he sprang from his seat and drew on a blackboard the shapes of the microscopic organisms that were the offenders in the mysteries of inflammation, his theories were being quietly absorbed and were receiving their rightful recognition across the channel in the seclusion of a physiological laboratory and a surgical operating theatre.

The story of how Lister supplemented and applied Pasteur's discoveries is perhaps the most fascinating part of our romance. Lister's appointment to the chair of surgery in the University of Glasgow and surgeon to the Glasgow Royal Infirmary, in the year 1861, came to him after he had made important experimental studies on the early stages of inflammation, coagulation of the blood, etc. These studies led him to correlate sepsis with putrefaction and to the realization that if putrefaction could be prevented sepsis could be avoided. But in the absence of a known cause for putrefaction, he could think only of cleanliness as a means of controlling the putrid products of operative and other wounds. His efforts, of course, were futile. Hygienic cleanliness was still unborn.

It is easy to imagine that one of the chief topics of conversation among surgeons of that day was this ever present spectre of infected wounds. It appears that on one of these occasions as Lister was walking home with one of his colleagues, Thomas Andrews, the professor of chemistry in Glasgow, as usual the subject of putrefaction came up. Thomas called Lister's attention to certain publications by Pasteur on the controversial question of spontaneous generation, the cause of fermentation, etc. Lister at once procured these papers. And lo, and behold, the solution of the riddle of the ages seemed at hand. The enemy resided not in the gases of the air as surgeons had hitherto surmised, but in minute living organisms floating in the air or present in the dust that settled on surrounding objects. And now one of Pasteur's favorite aphorisms "Chance favors the prepared mind" was to find its most dramatic and far-reaching application. Lister's was a philosophical, logical, and experimentally inclined brain. His general conclusions upon the revelations of Pasteur's work were: Prevent the germs from entering the wound—and secondly if once they have entered kill them before they have a chance to do further mischief, or, as proved by later developments, inhibit their growth without the necessity of killing them.

And thus the campaign for the battle royal against infection was set, and as we know culminated in the most signal victory in the warfare of science, and in the annals of mankind. The first event in the battle took place on August 12, 1865, in the Glasgow Royal Infirmary. The principle actors on that occasion being Lister, his house surgeon, MacFee, and James Greenlees, a lad eleven years of age, who had been admitted with a compound fracture of the left leg which Lister treated by his new antiseptic method. To Lister the most remarkable fact in the result, was the immediate conversion of the compound fracture into a simple fracture with a superficial sore.

The surgical world was soon divided into Listerians and non-Listerians. The controversy raged for a decade or more, but gradually subsided until none were left to decry this inestimable boon to suffering humanity. The Revolution of Surgery is the fitting heading to this chapter in the Romance of Surgery for it has entirely changed our manner of thinking and of working both in the home and in the hospital. A very interesting part of our tale could be written on the hospital then and now, but time does not permit the digression.

The outstanding effects of the revolution are the throwing down of the barriers in the field of surgery together with the reduction of operative mortality. In other words, the comparative safety of surgery. For there is no doubt that today we operate with a certainty of results which could scarcely have been dreamed of in a former day.

From the head downward there is scarcely any part of the body that has not been successfully subjected to surgery. Even the heart is no exception and the abdomen and the pelvis formerly considered as sacred precincts have almost become the "play-ground" of the surgeon.

The invisible lesions, especially those of the abdomen could now be exposed. One of the first fallacies to be expelled by this freedom was the idea of idiopathic peritonitis. Peritonitis, arising from within the abdomen was soon recognized as a lesion secondary to a primary source of inflammation.

To our ancestors peritonitis was a familiar term. And if the head-stones in our grave yards could relate more than the usual "hic jacet" we could easily compile statistics of the toll taken by the grim reaper from this one condition alone.

The recognition of the appendix as one of the most potent primary factors in peritonitis forms an interesting chapter in the tale we are trying to unfold.

There was little of the romantic in the controversy that arose around this question of primary peritonitis versus appendicitis or some other visceralitis—if I may be allowed to coin the term. But what seems almost as strange as both fiction and truth often appear to be, is that the many astute observers of a former day should have been so close to solving the problem of phlegmon in the region of the right iliac fossa without having come upon its solution. No less strange is it that in the face of the overwhelming force of facts, which neither theory could dispel nor speculation controvert, the profession were so slow to concede the rationale of appendectomy, after once the surgeon had gained the courage to enter the peritoneal cavity.

The opposition came from some of the most distinguished members of the profession. On one occasion (May 2, 1892) in discussing a paper read by me before the College of Physicians of Philadelphia, the late Dr. J. M. DaCosta, while agreeing with me on certain points, stated that he was not prepared to go so far with me as to advocate operation for every case of appendicitis, even in the first attack. To him it seemed that a person with appendicitis would go to bed, not with the sword of Damocles suspended over his head, but with the scalpel of the surgeon already on his abdominal wall. The reverse has come to be true, for in most instances unless the scalpel of the surgeon is at once on the patient's abdomen, the sword of Damocles is actually suspended over his head in the shape of recurrent attacks, and possible perforation and perhaps death. The battle is not yet entirely won and will not be until the nine-lived procrastinator finally disappears. Not until then will surgery enjoy the complete triumph of having added at least one to the list of curable diseases.

Because of the hidden seclusion of the appendix, it failed of recognition for so long as the malefactor in so many cases of abdominal inflammation. The role of other organs as the seat of disease was better known, but treatment was necessarily only systematic until it was found that by animal experimentation, especially directed toward a better knowledge of the physiology of the human body, that the removal of certain viscera was entirely compatible with life.

The thread of romance at this point is the interesting and fascinating demonstration resulting from the various "ectomies" that are being practiced today, of the law of compensation provided by a beneficent nature. The removal of one of a paired organ like the kidneys was the first to be attempted—and we know that the remaining kidney is capable of performing the function of both. Later the removal of single organs, such as the gall-bladder and the spleen was attempted.

In the absence of the gall-bladder the cystic duct takes on part of the function of the missing organ; regeneration of splenic tissue is a well known fact. This remarkable provision is so taken for granted today that we often forget to stop and marvel—"Can such things be and overcome us like a summer cloud. Without our special wonder."

Within the gastrointestinal tract it is the possibility of resection and anastomosis that should excite our special wonder. While most of these operations were deliberately devised and tried out by animal experiment, there is one which we owe to sudden inspiration and which now (with certain modifications) is an everyday occurrence in every large operating clinic. Not only that, but has become as fruitful a source of controversy as pertained to the early days of appendectomy.

It is no doubt a familiar story to you how gastro-jejunostomy originated—The scene is laid in Bilroth's clinic in Vienna in the year 1881. The participants are Wölfler, the surgeon, Nicoladini, his assistant, and the patient—a man suffering from pyloric obstruction. Standing at the side of Wölfler in the presence of what proved to be an inoperable carcinoma of the pylorus,—Nicoladini, as Wölfler was about to close the abdomen, suggested that a new passageway for the food could be provided by anastomosing the small bowel to the anterior wall of the stomach. It was a bold suggestion, especially in that the anastomosis was made in the anti-peristaltic direction, but fortunately the operation proved a success. The patient made a good operative recovery and four weeks after the operation was discharged in good condition. The defects of the procedure became apparent in the second operation performed by Wölfler. The patient died and at autopsy it was found that a vicious circle had formed as the result of spur-formation. The publication of Wölfler's experience aroused the interest of the surgical world. Increasing observations and experience gradually led to changes and modifications in the procedure, as we know them today. As I have already said, the subject of gastrojejunostomy provided and still provides a very fruitful source of discussion to this day, for it soon became apparent that the method would be of value also in the treatment of benign diseases of the stomach and duodenum, especially ulcer, which, like the poor, we have with us always.

At the outset I promised not to take you back to the beginnings of our romance, by this time, I am sure you are hoping that I won't keep you long enough to bring the story up to date. Indeed, it would be a stupendous task, for almost every day we are brought face to face with something new to excite our wonder, that such things can be.

If I may be permitted a glance into the future I would say that the immediate trend seems to be toward more surgery, which by actual sight is unfolding pathology as it exists in the living subject. In a more remote time it may be that the correlation of the pathologic facts thus revealed with the end results of operations in large numbers of cases, together with the further development of the chemistry of the human organism may lead to the day when less surgery will be required for internal diseases. Be that as it may, the present era will doubtless be known as the surgical era, to which future generations will acknowledge their indebtedness in equal measure with their obligation to Pasteur and Lister.

THE LIFE INSURANCE EXAMINER*

W. E. Long, M.D., Mason City

The work of a physician who is examiner for a life insurance company, is very important. The final examination on the life of an applicant is made by the medical department at the home office of the insurance company. Its disposition of the case depends largely on the written report of the local examiner, who makes a personal examination of the applicant. The report of the findings are recorded on printed forms which contain questions that are answered in accordance with the findings of the physical examination, made by the local examiner. In a large number of examinations, especially when the applicant is a normal individual the answers to questions submitted are quite sufficient and satisfactory. However, in many cases explanatory notes and personal letters are necessary in order that a perfect pen picture be given to the chief examiner. For we must not forget that he must visualize the applicant through our remarks and explanations as given in the report.

From a business standpoint we should always keep in mind an important fact: That competition in life insurance is very keen. That applicants are the insurance company's customers; and that we can be of great assistance by thoroughly completing the examinations promptly, and in a manner that will be at once satisfactory to the chief examiner so that he can approve an application and then close the deal for the com-

*Read before the Fark Hospital Physicians' Club, Mason City, Iowa, December 10, 1925.

pany. This is a courtesy that is very much appreciated by the company. Applicants, too, are satisfied and pleased with a prompt issuance of the policy. In many cases large business deals hinge on the acceptance of the applicant as a life insurance risk. Reasons for accuracy and speed are obvious to all concerned.

The agent spends a great deal of time, often weeks or months in writing an application. This is good so far as it goes but the policy is not given until the medical examination is made. Right here is a crucial time and no one can blame an agent who is very anxious to have the local examiner on the job. Usually this is done by appointment, yet in many cases no one knows better than the agent that the examination should be made without delay. He knows the psychology of the case better than the examiner can realize. Then it is up to the examiner to cooperate by giving personal attention to the case at the time designated by the agent. I know sometimes the agent seems to be too anxious and makes it the rule to run his business along this line—days, nights, and Sundays, sometimes at ungodly hours. Yet I believe this is usually the exception rather than the rule. My observation is that agents are fair and that the obliging examiner is made a friend of the agent, thus making congenial cooperation.

The examination should always be made at the office. However, there are instances and good reasons why the examiner should examine the applicant at his home or at his place of business. Insurance companies recognize this and accept an examination if thoroughly done regardless of the appointed place. It must be so stated and an explanation be made.

The applicant who appears for examination is either a patient, personal friend, business associate, casual acquaintance or entire stranger to the local examiner. If it happens to be a patient whom the examiner has treated, the matter of examination is thus made easier as he is conversant with any personal ailments, etc. If a personal acquaintance, it helps some but the examiner should be on the lookout for any irregularities and ofttimes interesting conditions are revealed. This is true of a business man. We may know him in a business way but this should have no bearing on the real examination we are to report to the company. This is likewise true of a casual acquaintance. We know his general mode of living and habits, all of which we have in mind and incorporate in our findings but the entire stranger who appears for examination must receive our closest scrutiny. The work of a life insurance examiner is something more than physical examiner. He must be a detective in a way and be on guard for any covering of symptoms or suppressing of facts.

The first portion of examination is oral and is a history of the applicant's record up to the time of examination. Any statements made are finally signed by him and he alone is responsible, unless, the examiner in his report says he is personally acquainted with the applicant, then it does not augur well for the examiner, if an adverse report is turned in by special reporting agencies which are usually employed by all insurance companies. If the examiner says he is not acquainted or has only casual acquaintance then he is absolved from any responsibility in the report.

The history of a former illness as reported by applicant must be considered as such. However, I feel that in many cases a mistaken diagnosis at the time often disqualifies the applicant or a higher rate is charged. This is especially true in reported pleurisy, appendicitis and gall-stone colic cases. The physical findings are all negative yet a history of having had any one of these diseases makes a questionable risk. I know no other way can be used but nevertheless in case of error of diagnosis a serious handicap is placed upon the applicant and we must do all we can to overcome an erroneous report of wrong diagnosis in the back history. The family history report deserves very close scrutiny on the part of the examiner. Many applicants are not familiar with real facts in regard to family history. Answers to questions lack definite portrayal of the real essence of this part of the examination. At least 50 per cent of applicants know little or nothing of grandparents. It is up to the examiner to obtain as reliable information as possible. The family history is important. Much time and care should be used in this portion of examinations.

Part two of examination is purely a physical examination. The technique of which is not necessary to describe. Urine examination if made carefully with good light seldom is wrong. Yet a trace of albumen might be present and in a hurried examination at night might be overlooked. If specimen is sent in to the home office and albumen is reported as having been found there, naturally the local examiner feels a bit chagrined if his report was negative.

An examiner who examines for a number of different companies should always maintain dignified neutral ground with reference to the various companies. He should so arrange his appointments if possible so that there be no conflicting dates with the resulting embarrassment

of competing agents appearing at the office at the same time. This can be easily avoided by a little care and forethought on the part of the examiner. Aiding or giving out information from one agent to another is grossly unethical and can only lead to a suspicious attitude on the part of one or all of the agents. Always endeavor to keep the respect of agents, who usually will respect your honorable attitude with regard to these things.

All in all, the work of examining life insurance applicants is not unpleasant, indeed, it is a pleasure and in a way takes on a social aspect. It is refreshing to have an individual appear in the office who is not complaining of anything. Sometimes he is too optimistic but it is up to the examiner to ferret out any irregularities. In all it is a form of contact and an acquaintance is formed that later on may mean new business. The remuneration fee of $5 is ample. Collection 100 per cent. The insurance company keeps the books and each month sends a check to cover. The auditing department is carefully handled and is always satisfactory. If all our accounts could be handled and paid as promptly as are the services for insurance examinations our monthly stipend would be considerably augmented.

CONCERNING THE CONSTITUTION OF THE PATIENT*

Hugo W. Traub, M.D., Chicago

The year 1922 witnessed the centenary of the birth of two men of surpassing genius. The one, a French tanner's son, even during his own lifetime had achieved undying fame by a contribution second to that of no man to the civilization of the dying nineteenth and the dawning twentieth century. The other, an Austrian farmer's boy, becomes an Augustinian monk, later, the abbot of his monastery, cultivates a garden during his meditations, makes some horticultural experiments, publishes the results of these, and is completely forgotten for thirty-five years. The centenary of the one is the occasion for a worldwide demonstration to his genius, and medical men particularly have reason to acknowledge his service to medicine and to mankind. The name of Pasteur is a household word become a part of the vernacular; that of Gregory Mendel was dragged from its obscurity only since the year 1900, when three botanists, working independently, almost simultaneously rediscovered the significance of a contribution buried in an obscure journal—a pioneer discovery perhaps not inferior to that of Pasteur.

The influence of Pasteur still dominates modern medicine. It dominates not only medical investigation, but it has affected the very character of clinical practice itself. This we have all sensed. But it was Pottenger who was among the first to point out in a manner both vigorous and attention-compelling that the multiplication of laboratory methods generally and the technical simplification of these, and over and above all, the enormous development of roentgenology—have all but relegated pure clinical observation to the scrap heap. And yet we cannot conveniently carry much laboratory equipment around with us and some among us must still occasionally see and serve a patient at a place other than the hospital or our office!

For fully two generations the microcosm, the unseen world, has almost exclusively engaged the attention of medical investigation and during the first half of this period discoveries concerning the nature of many disease processes, both plant and animal, rapidly followed one upon the other. But this many men still living have themselves witnessed and besides that story has been told far better than I can tell it. Yet must we not acknowledge that the yield of this bacteriologic field so persistently and so prodigiously toiled has become much less abundant? Notwithstanding the technical experience gained during this earlier period, and notwithstanding great refinement in technique and colossal expenditure of time, labor and substance—must we not acknowledge that this field appears to become increasingly sterile?

Never before in history has any scientific method been applied on a vaster scale than were the methods of the bacteriologic laboratory during the last influenza pandemic, and yet what has been the net yield? I am not unmindful of the great advances in the domain of immunology—that child of bacteriology—yet how much do we really know concerning the essential nature of immune processes? Aside from certain definite and immeasurably valuable advances in the field of immunity, the last great milestone on the bacteriologic trail was set by Schaudinn and Hoffman in 1905, and it is marked with the name of the pallid spirochete.

But does this alone warrant this presumption, this heresy, of placing the name of any man alongside that of Pasteur? It does not until we may have inquired what the real significance of Mendel's discovery may have been.

But in order that we may gain a proper perspective it is necessary that we take note briefly

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of the historical background of the last twenty-five years. It is now generally known that Mendel's experiments in his peabeds caused him to formulate two general laws deduced from the results of controlled cross-fertilization among plants.

When the three botanists, deVries, Correns and Tschermak, in the year 1900, literally rediscovered this epoch-marking work, as powerful and perhaps an even greater stimulus was given to biologic thought and direction as was by Darwin and Pasteur.

Since then an enormous volume of experimental work—and no mean part of this by American investigators—has not only confirmed Mendel's own experiments among plants, but four additional important laws or generalizations have been added to the original two. And these are based largely on observations among a certain convenient species of fly—the so-called drosophila melanogaster—as well as other suitable lower animals. I purposely avoid even a restatement of these laws because they are intrenched behind an almost forbidding terminology.

But what is the significance of Mendelism, in a more restricted sense, to human pathology? For it is its relations to human pathology which not only concern us directly as physicians, but which have far-reaching social and even political implications. More than one wise clinician, who was quite innocent of bacteria and who possibly would not see anything through the microscope with one or both eyes, has remarked that while there are undoubtedly certain diseases, there are also different humans who have these diseases. There are, moreover, certain terms, which to the older clinicians had something more than a vague meaning, which we of the Pasteurian era have been taught to shun, zealously to avoid, because they are not scientific. They spoke of certain diatheses, of special idiosyncrasies, of the particular constitution of an individual or of a family. Yet these were terms born of keen clinical observation and of shrewd insight. They were empirical terms born of the necessity of describing that which was observed though not fully understood about nature's experiment at the bedside. But the empiricism of one day becomes the high-browed science of the next.

The influence of Pasteur had caused medical thought and effort to be directed to the environment of man. Transposed to clinical practice, the successful hunt for the causal organism too often ends the quest and interest.

The effect of Mendelism has been to redirect attention to man, to the patient himself.

As long as twenty years ago, Sir Almroth Wright attempted to measure that vague something which we call resistance to an acute specific infection. But the opsonic index came and went, partly at least because it sought its answer to the question in the wrong cell.

But there is another circumstance, another factor which has entered the equation, and which has changed our outlook. The intensive study of the minute world has given us a considerable measure of control over the acute infections. Yet we notice all about us, and it is not a chance observation, for there is ample statistical evidence to support it—we observe a marked increase in those chronic degenerative processes of late life, in which infection often plays an insignificant, if indeed, a role at all. I refer especially to those chronic degenerations of the cardiovascular apparatus, of the kidneys and the nervous system which take men off abruptly when in their prime, or which condemn them to a premature invalidism. The current conventional explanation of this phenomenon ascribes its cause to the greatly increased stresses and strains of modern life, to our high pressure mode of living.

And while this is doubtless true, it is surely not the entire truth. Here, we have again an example of the same tendency, namely that of focusing our attention on only a part of the picture, of noting only one part of the etiologic equation. We look sharply to what appears to cause the trouble, but tend to ignore almost entirely the man who has it.

Mendelism redirects attention to the germ cell, whence every higher living organism had its beginning. We are no longer in the realm of speculation when we say that the potentialities of every living thing are not only fully contained within the first cell resulting from the union of the two germ cells, but these are predictable within ever widening limits. The great life insurance companies had long before Mendel learned by experience that the life expectancy of an individual is, other things equal, written in the ancestral record of that individual. We have, moreover, today overwhelmingly abundant evidence that just as the child inherits from its father and its mother certain normal physical characteristics—stature, eyecolor, depth of skin pigmentation—just as it inherits liveliness, mathematical or musical ability, mechanical dextrousness—so will it inherit, other things remaining equal, pathologic tendencies which are there for us to recognize if we have eyes to see.

The mechanism of this process is one of the most fascinating, one of the most enchanting in modern biology, and some of the most important

contributions in this field have been made by Americans (Castle, Morgan, Jennings, East, Conklin, Guyer).

Most of the literature which it has been my privilege to see ascribes to the chromosomes of the germ cells the major role in this process. It is not one of the least significant observations established about these, that, while their number for various species and various genera appears to differ, yet for each member of that group and for each cell of each individual, their number is constant—with one exception. The germ cell contains only one-half the number of chromosomes, contained within each somatic cell, for man, this number being probably twenty-four. In a popular article recently published by Professor East—whose words I cannot improve upon he defines these as "those minute freight cars within each living cell, whose operations with the materials they contain build up the body characters of every organism."

It is an extension of these studies, due clearly to Mendelian influence, which has given us a highly developed and exceedingly active and specialized subdivision of biology, called genetics. And it is a singular circumstance that while some of the most distinguished research workers in this field are Americans. who have been laying foundations in American laboratories for twenty years, interest in the child of this science—the constitution—appears only very recently to have reached our eastern shores.

While the constitution concept is by no means new, the Germans particularly early saw the possibilities of developing a fresh viewpoint toward the same—one based on the discoveries of the biologic laboratories. Thus there has developed a new pathology of the constitution and of inheritance. The Dutch pathologist, Tendeloo, has even widened the general concept and has devised the expressive term "Konstellationspathologie", which encompasses not only everything which we understand by exciting cause and constitution, but which has for its central tenet the proposition that no pathologic process can ever be due to a single cause, but must of necessity be due to a "constellation" of multiple causes, effective at a given time.

But I know very well that by this time the question has become insistent with you, as it is with me, of what practical use is all this? What can we do with it?

There are two ways by which we can turn some of these conceptions, new at least to some, to practical account. In the first place by recognizing the fact of inheritance in human pathology we shall regard many conditions with different eyes.

While not all of the observed facts of heredity are Mendelian in character, that is to say, while not all apparent hereditary phenomena obey Mendelian laws, there are now nevertheless about fifty pretty well established traits of the so-called dominant type, and about a like number of the recessive kind. Most of these involve the skeletal system, the central nervous system, the eye and the skin. I should regard it an imposition if some one compelled me to listen to a reading of the entire category. Moreover, some of these are very rare conditions and most of us do not live long enough to see many of them.

Yet every ophthalmologist, I imagine, has a lively interest in the essential character of coloboma of the iris, in retinitis, pigmentosa, in hemeralopia, with the study of which the names of Cunier and Nettleship are especially identified. Every railroad surgeon has a very responsible duty toward colorblindness, which is transmitted in strict Mendelian fashion and is of the sexlinked type. There are families in whom an abnormally blue sclera is a transmissible trait and it is an interesting fact that in the late and unlamented German army, recruiting surgeons were required to reject recruits with this anomaly, because it had been found that such men were peculiarly susceptible to fractures. To this phenomenon I shall revert in another connection.

Every neuropsychiatrist recognizes the marked hereditary factor in such things as e. g., Huntingdon's chorea, in epilepsy, in amaurotic idiocy, to say nothing of the vast field of the dementias. Because the dermatologists have a habit of concealing themselves behind a Graeco-Roman barricade, I shall omit naming the rather numerous skin conditions which are said to have Mendelian implications. One of these I have myself had the opportunity to study in a limited way—premature graying of the hair.

All of us, regardless of where our special interest may lie, have occasionally a rather acute interest in that most interesting of diseases, hemophilia, which has been long known to have its foundation in the germplasm, which occurs only in males, but which can be transmitted by the female alone, and by her only to one-half of her male offspring. The mechanism of this process, so-called sexlinkage, is now, thanks to the labors of Castle, perfectly well understood and it is the best known type of sexlinked inheritance.

I have left discussion of the skeletal system for the last. Since the skeleton determines the general physical identity of our outline, and it is

necessary to look at it from more than our one particular angle. The frame which the skeleton determines also betrays certain inherited normal as well as pathologic tendencies. But I should scarcely dare to presume to present as something new, observations with which names that loom large in the history of medicine of the past one hundred years have concerned themselves. It was Beneke, I believe, who was among the first to point out the greater incidence of malignant disease among individuals who are massively built, whose bony architecture is of the heavy rather than of a slender, graceful type. Again, it is, I believe, the universal experience that pulmonary tuberculosis occurs with greater frequency in long narrow chested people with winged scapulae than it does in relatively short and broad chested ones. On the other hand, individuals who happen to be endowed with full deep chests resting on a heavy frame are certainly more prone—or to put it the other way around—are those in whom we find chronic degenerative cardiovascular disease more frequently than we do in the so-called paralytic chest. These observations have their corollary in the old teaching that an acute costosternal angle predisposes to tuberculosis; an obtuse one to cardiovascular disease.

These are, of course, not the observations of a single observer, but Beneke and Rosenbach in Germany, more than fifty years ago, were profound students and the chief exponents of what for want of a better term we call the constitution. But in England, too, there are the impressive names of Jonathan Hutchinson and of Addison associated with the study of structure in its relation to disease.

However, the insistence of modern science for the quantitative treatment of observed facts has provided medicine with a new handmaiden. Physical anthropology has been furnishing the needed exact measurements, the correlations and the coefficients that enable us to speak not only of an art but also of a slowly emerging science of medicine. There has, moreover, been founded and there is in active operation at the Presbyterian Hospital in New York a constitution clinic, where Draper has made a large number of measurements, on the basis of which he has written a monograph—from a strict anthropologic point of view. Accordingly, if I understand Draper aright, our constitution from this point of view is a labile thing, subject to the play of nutritional, endocrinous, or degenerative forces at varying periods of life. From the Mendelian point of view, the constitution concept is static and stable; the mosaic of the future is set in miniature in the first cell and is subject almost wholly to subsequent environmental influences.

Many other attempts have been made to classify man according to his structural, his functional, or his psychic make-up, attempts which were shelved while investigators were fascinated by the brilliancy and the enthusiasm of the early Pasteurian era. Eppinger and Hess, for example, attempted a classification according to the state of the vegetative nervous system, postulating vagotonic and sympathicotonic makeups; Tandler used the muscle tonus for his criterion, dividing us into hypo- hyper- and normal-toned constitutions; Sigaud conceived a scheme which was an outgrowth of the observations of the celebrated French anthropologist, Bertillon, among criminals, and which depended on exact measurements of structural relations. But all of these classifications have two weaknesses: 1. they do not provide us with a standard and do not, therefore, supply us with the means of measuring and thereby recognizing deviations from the normal, although it seems quite possible that anthropometric methods may meet this demand; 2. as soon as we attempt to apply any of these classifications, we discover, as Siemens has pointed out, an almost infinite number of mixed, composite forms, so that the unclassifiable may become the largest group.

Yet tentative schemes, whose imperfections we recognize, are not without their usefulness, and the classification of Sigaud is the one which has had the greatest appeal for me.

Sigaud casts all men acording to their general structural makeup into four groups: 1. respiratory type, characterized by an exceptionally well developed thorax and those parts of the head and face which aid in the respiratory function. The thorax and neck are both long and the abdomen is comparatively small. In consequence of the large chest, the vital capacity of this group is large; 2. digestive type, distinguished by a powerful development of the lower third of the face, a massive lower jaw with sound teeth, a short neck, a broad and deep but short thorax merging into a prominent, usually obese abdomen; 3. the muscular type, characterized by a square face because its three segments are of about equal development and harmoniously formed; the eyebrows are low and long, as is the general hairy covering. The trunk is symmetric, there is no disproportion and the extremities are sharply modeled by the prominence of muscles and tendons. This is the type which corresponds to the classic ideal, and while it is the mold from which the athlete is cast, it is also frequently found, according to Bauer, among criminals; 4. the cere-

bral type, finally, as one might guess from its name, shows a certain disproportion between skull and stature. The upper third of the face is especially prominent, the eyes large, as are the ear lobes, but the extremities relatively short and the feet small. The stature generally is delicate and graceful.

I have gone to the length of describing these types, not because I attach any greater value to Sigaud's scheme than I do to that of some one else, but because had I never heard of the same, I should have nevertheless grouped together one important and rather common group of patients —and this group appears to fit very well into one of these pigeonholes of Sigaud. I refer to a certain group of cardiovascular patients whose significant symptom is chronic hypertension. Several years ago Warfield suggested a classification of patients with hypertensive cardiovascular disease, which included a group of what he called hereditary or cerebral cases; hereditary, because of a heaping of these cases in certain families, and cerebral because of their manner of termination. These patients were as a group people of robust, florid habitus, what one would call thickset, stocky. Many are fleshy and their average age is middle or late middle life. They have hard, tortuous vessels and a demonstrably enlarged heart. The urine, however, is a comparatively normal urine. Albumin and casts are but rarely found and the phthalein excretion is normal or but very little reduced. Anatomically there is an enormous hypertrophy of the left ventricle and the aorta is thickened.

There are diffuse renal fibrotic changes without, however, much glomeruler or tubular involvement. The common termination of such is by apoplexy. It is these patients whom we see every day about us dropping off suddenly on the street, in their homes, at their usual occupations, whom we all recognize as a special type and who correspond almost perfectly to the digestive type of Sigaud. Yet this classification of Sigaud is one in reality of a large number of perfectly sound people, and its main usefulness clinically is to put into orderly form what every clinician sooner or later learns to appreciate intuitively. There are, however, certain constitutional makeups which are *per se* and out and out pathological. I cannot do much more than name some of them; status thymolymphaticus of Paltauf, which is usually unsuspected and accounts for some sudden deaths in the course of some insignificant procedures or the parenteral administration of foreign protein; status hypoplasticus of Bartel, perhaps a later stage of the former; status exsudaticus, or the exudative diathesis of Czerny, well known to the pediatricians.

But aside from all these states affecting the body as a whole, there are recognized also a series of partial constitutional defects. Bauer divides these into those involving a lateral half of the body, as e. g., a large unilateral hemangioma, a unilateral clubfoot, or again that condition known to the eye men as heterochromia of the iris, which has distinct hereditary aspects and which because of its inherently much greater tendency to iritis in the paler eye, has practical clinical importance.

2. Certain conditions which involve exclusively the structures derived from one or another of the three primary germ layers; we may consider here again, chiefly to illustrate, naevi, the neurofibromatosis of Recklinghausen, ostegenesis imperfecta of Aschoff, which is associated with the abnormally blue sclera that I have already mentioned.

3. Certain defects involving only a particular system or an organ or a part of an organ; to illustrate, we can consider such things as multiple sclerosis, Friederlich's ataxia; or again, that most impressive example of a peculiar predisposition of the skeletal system, which Ransohoff reported, of a woman who succumbed to a sarcoma of the femur, one of whose sons also developed a sarcoma of the femur, a second one of whose sons suffered from an osteitis deformans and of a child of the latter, which at the age of six months suffered a fracture of the left tibia.

4. Finally, constitutional defects may extend to certain functions involving diverse structures, without limitation to a particular system, organ or germlayer. In this group we place the relatively rare so-called renal diabetes, levulosuria and a number of other disturbances of metabolism.

But all of these things, and I have mentioned but a few of those that have been described, are, from the standpoint of the study of the constitution, evidence of the same quality, namely a defective quality, an inferior state or the status degeneraticus in its larger sense.

Yet while a person with a large naevus or a harelip or an epileptic is obviously a biologically inferior individual, we should scarcely consider Napoleon, who is said to have been subject to fits, or Lord Byron, who is known to have had a clubfoot, a degenerate. I have purposely avoided thus far allusion to the endocrine glands, and their relation to the constitutional make-up of man. There is current so much fiction, and we are in possession of comparatively so few facts, that it seems that we ought to take a middle position between the extreme skepticism of the laboratory bound research worker, and the utterly irrational flapdoodle of the commercial endo-

crine therapist, to whom the endocrines are the cause of and the cure for all known and unknown ills alike.

We know that a sound individual must have normal ductless glands, and we know next to nothing concerning some of these and the interrelationships of the ductless glands. We know that there are specific disturbances of one or more ductless glands which may cause profound changes in external appearance. But I know of but one common disease which has distinct hereditary bearings and which has its direct cause in a structurally determined endocrine deficiency. In our older text-books diabetes mellitus used to be grouped under the category of the constitutional diseases. At present we find it under the diseases of metabolism. But the very fact that not all obese, physically inactive individuals, even though they may abuse sugar, suffer a degeneration of their islets of Langerhans, added to the well known familial tendency of diabetes, would make the old conception of diabetes as a constitutional disease seem a perfectly sound one.

Thus by recognizing this factor of the individual's constitution, that is to say, the element of his hereditary make-up in the causation of disease, we shall gain a bigger and a broader viewpoint. This cannot but have a salutary effect on diagnosis, prognosis and therapy.

But there is at least one other mode in and through which some of this relatively new aspect of the constitution may be turned to practical account. We owe the laboratory much, and in the very field of the constitution it is essential to progress that we encourage pure research. The clinical laboratory, too, is within certain limits indispensable; but is it not possible that it has arrogated to itself, or has had thrust upon it, a function which is not its proper function? If a carefully elicited history and as careful a physical examination are replaced by laboratory reports, we cease to be physicians in the better sense of that word. We shall have then become in reality collectors of reports on laboratory procedures of whose essential character and significance such collectors in the very nature of things tend to become more and more innocent.

Moreover, the greater this tendency to make the clinical laboratory a reed to lean upon, the more extensive the atrophy of the power to observe the patient himself. The study of the constitution, therefore, contains within it not only the probability of eventually causing a reorientation of medical investigation and practice, but the very practical effect of redirecting our attention to our main business—that of clinical observation.

DIFFERENTIAL DIAGNOSIS OF NEOPLASMS OF THE PELVIC BOWEL

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Cancer of the rectum may be confused with a number of other conditions benign, inflammatory and traumatic, occurring either within the rectum or in the pelvic structures, and by reason of its insidious onset, may not be recognized until too late to afford permanent relief.

Epithelioma at the anus may be mistaken for fissure, condyloma tubercular deposits, actinomycosis or an ulcerated hemorrhoid.

A malignant tumor is to be suspected within the bowel in any adult where a bloody diarrhea exists that cannot be accounted for by parasites or bacteria. Digital examination is sufficient only if the tumor is low down (within four inches from the anus). Ten inches may be inspected through the proctoscope and even a greater length may be examined with a bimanuel examination. Benign tumors as a class are soft, have pedicles, project into the lumen of the bowel, are movable, and do not invade surrounding tissues, while the malignant growths are more or less solid or hard, and spread out between the mucous and muscular coats of the rectum in such a way that they invade several square inches of the bowel and yet project very little if at all into the rectum. All growths with a broad infiltrating base are to be considered malignant. Where secondary growths in other organs produce symptoms before intestinal obstruction occurs the local symptoms may be obscured and the diagnosis clouded.

Scirrhus cancer if seen early presents through the proctoscope a stiffening induration on one side which closely resembles fibrous stricture, but the history of the trouble will differentiate the two. Carcinoma begins insidiously, whereas inflammatory stricture follows trauma, ulceration or suppuration. Later, when obstruction begins there occurs colicky pains in the stomach or small intestine and occasionally sharp, cutting pain in the region of the growth. Intense peristalsis above the mass produces intussusception. The location of the trouble is of much significance because a fibrous stricture occurs usually in the rectum and rarely in the sigmoid, whereas, scirrhus cancer is uncommon in the rectum but is generally found in the sigmoid.

Medullary cancer presents a very different pathological and clinical picture. Constipation may not be noted, but in its stead a teasing tenesmus with the passage of flatus, mucus and perhaps blood. Although the sufferer may defecate

twenty times during the morning there is always a feeling of something left in the rectum. This diarrhea is most urgent in the morning and is spoken of as a morning diarrhea. The first passage in the morning is mostly mucus, pus and bloody, a little later there is a good fecal evacuation, but during the rest of the day the evacuations are gas and mucus accompanied with teasing tenesmus. Hemorrhage is variable. Through the proctoscope is seen a red berry-like mass projecting from the side of the gut with a pale areola of mucous membrane about it.

Encephaloid cancers break down and ulcerate early. At first the normal mucous membrane is movable over the growth, but it soon ulcerates; this degeneration may occur at one or several places simultaneously and the mucous membrane is honeycombed with ulcerating spots through some of which the cancerous growth may protrude. Ulceration begins at the central or denser parts of the cancer and is not limited to the superimposed mucous membrane but invades the deeper structures and in some cases extends into surrounding tissues. While the periphery is advancing into new tissues the center is undergoing degeneration. Around the edges the new growth, together with the inflammatory reaction, raises the border and gives the ulcer a crater-like appearance. The muscular tissue seems to have greater resisting power and prevents somewhat the extension of the ulcerative process. The extension, however, progresses irregularly and creates a ragged edge. If the tumor is high in the sigmoid or in the colon the diarrhea may be so annoying as to make the proctoscopic examination unsatisfactory without first thoroughly irrigating the bowel.

The encephaloid cancer may be mistaken for the benign adenoma or papilloma which occurs quite frequently and are important because not only are they sometimes very difficult to diagnose but frequently carcinomatous changes occur in the benign tumor if it is left or a cancer recurs when the apparently benign tumor has been removed.

Benign growths are usually attached by pedicles but if they have broad bases they are never indurated. Inasmuch as these tumors are so liable to contain malignant cells or to develop malignancy later, I never place much credence in laboratory findings of bits removed from the tumors, because part of the tumor may be benign and another part malignant. Benign fibrous stricture due to non-specific ulceration and following long after some previous rectal trouble is most difficult to differentiate. It is smooth and regular in contrast with the irregular, nodular and rough appearance of cancer. Of course, the history of the case is entirely different as the traumatic stricture produces no symptoms other than obstruction.

The congenital stricture is frequently unobserved until the affected child eats solid food and the stools are formed, but it is almost always recognized before puberty. The symptoms are those of obstruction in an otherwise healthy child, and of long standing, whereas carcinoma does not occur until adult life.

Syphilitic lesions in the rectum may be mistaken for cancer, particularly the encephaloid cancer. Chancres are very rare above the anorectal line. Mucous patches occur about the same time as the macular eruption on the skin. Both these lesions have a tendency in ulcerating to follow the blood-vessels and lymphatics, so that the ulcer spreads upward rather than laterally. There is considerable discharge of that peculiar chancre smell. It is very different from carcinoma.

Gummata begins in the connective tissues and if seen early the mucous membrane is free above the tumor, which is round and elastic, and may be as large as an orange. Later it undergoes fatty degeneration and ulceration and the cicatrix may cause stricture.

In the proliferating proctitis fragile villous teats hang from the mucous membrane. There is an abundant discharge of muco-pus. The granulating mass is soft and its base is limited to the mucous membrane, but does not infiltrate below. The growth spreads all over the rectum and is not limited to one part.

Syphilitic stricture in the lower rectum can hardly be mistaken for cancer because the history is much more chronic, the infiltration is more diffuse and lacks the hard, nodular feel of carcinoma, the ulcers are more shallow, have smooth edges and finally the history of syphilis can usually be elicited. In any suspected syphilitic lesion the spirochaeta should be sought.

Acute and chronic colitis accompanied with hemorrhage and loss of weight and the usual spasm of the bowel may simulate cancer but the bosselated inflamed mucous membrane covered with blood, mucus and pus as seen through the sigmoidoscope will clear up the diagnosis.

Tuberculosis is more difficult to differentiate especially if involving the anus, but there is usually evidence of tuberculosis in other parts of the body. It rarely causes obstruction as the infiltrating deposit ulcerates early and the ulcers are shallow and with undermined edges. The tumor is small and is due to inflammatory exudates and involvement of the glands. Micro-

scopically, tubercular inflammation and bacilli may be found.

Actinomycosis of the bowel must be thought of, although 60 per cent of the cases of actinomycosis are confined to the neighborhood of the appendix and cecum and may closely simulate appendicitis. (Lynch.)

Among the less common conditions, which, however, must occasionally be differentiated are traumatic stricture, which is felt as a dense, sharp, constricting ring and presents no symptoms other than those due to obstruction; chronic appendicitis especially if the mass is located on the right side and which an operation will decide, fecal impaction which lacks the infiltration and usually has only the one symptom of obstruction; and finally extrarectal growth and inflammation which occludes the lumen of the bowel by pressure or involving the coats of the tube by extension. Cancerous growth of the sigmoid may be palpated through the abdomen often before it produces obstruction. Carcinoma may be mistaken by its symptoms for chronic dysentery, because of pain, tenesmus, and blood and mucus stools; but careful digital and sigmoidoscopic examination with the assistance of the fluoroscope's screen or x-ray picture will clear up the condition.

Hypernephroma or prolapsed kidney may simulate a tumor of the bowel, but will be differentiated by finding blood in the urine and later by ureteral catheterization. Hypernephroma tumor is behind the bowel thus affording a tympanic instead of a dull percussion note. The symptoms come on slowly with lumbar pain radiating to the abdomen and down the thigh.

Diverticulitis occurs in the sigmoid and may be mistaken for cancer. It usually produces a large tumor which can be palpated through the abdominal wall.

Cancer, until late does not present adhesions. Diverticulitis produces a tumor that clinically very much resembles cancer, but it occurs early. When the abdomen is opened, if a large tumor mass is found adherent, as is commonly the case in diverticulitis, it is quite probable the condition is not cancer, because cancer of the large bowel does not become adherent until late in the disease. The adhesions are due to infection. They cause obstruction and they do not require removal. Just passing around them with a lateral anastomosis does as well as the more severe operation of radical removal.

In any of these cases where the diagnosis is doubtful and an exploratory laparotomy is made, the incision should be placed as for colostomy, so that if removal of the tumor is unwarranted, an artificial anus may be made at once.

DON'TS

Don't attach undue importance to a patient's history of "piles", "indigestion" or "constipation", but insist upon a rectal examination in every instance.

Don't assume that the passage of bloody or slimy stools is due to dysentery. There may be cancer.

Don't assume that bleeding from the rectum points to piles. It may be due to cancer.

Don't expect always to find cachexia in rectal cancer; many patients in the advanced and inoperable stages may yet appear robust.

Don't forget that recurring attacks of morning diarrhea should suggest cancer of the rectum in its early stages.

Don't rely upon digital examination of the rectum when examining for cancer, as the proctoscope and the sigmoidoscope are not necessary for a correct diagnosis.

The classical signs of cancer are the signs of its incurable stages. Do not wait for the classical signs.

Early cancer causes no pain, its symptoms are not distinctive, but should arouse suspicion. Confirm or overthrow this suspicion immediately by a thorough examination and, if necessary, by operation. The advice "Do not trouble that lump unless it troubles you" has cost countless lives.

There is no sharp line between the benign and the malignant. Many benign growths become malignant and should therefore, be removed without delay. All specimens should be examined microscopically to confirm the clinical diagnosis.

Precancerous stage. Chronic irritation is a source of cancer. The site and the cause of any chronic irritation should be removed. All erosions, ulcerations and indurations of a chronic character should be excised. They are likely to become cancer.

Don't forget that all rectal cancers, which compose about 16 per cent of all malignant growths of the digestive tract and about 9 per cent of all cancers, are detected less frequently in their early stages than are cancers growing in other parts of the body. This fact is due partly to their insidious development, and partly to neglected or incomplete rectal examination.

SUBMUCOUS RESECTION OF THE NASAL SEPTUM

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Probably no surgical procedure has had so many conflicting reports as to results, as the submucous resection of the nasal septum. This, however, is due not to the fault of the operation, as much as to the poor judgment of the operator. Before resorting to this type of nasal surgery, there must be no question in the surgeon's mind that the deformity of the nasal septum is the basic cause of the symptoms present. In addition to this, the rhinologist must remember that a submucous resection is not necessarily curative in itself, but in the majority of cases, is simply a means of removing a condition which prevents cure by treatment. In order to get the best results, careful after treatment must be instituted for varying lengths of time.

Most rhinologists will agree that a submucous resection is indicated for the relief of three general conditions. 1. To restore the normal respiratory function of the nose. 2. For the relief of pressure. 3. For the drainage and ventilation of the nasal accessory sinuses.

In the first class of cases, the diagnosis is usually made clear by ocular inspection, alone. These deflections are usually located in the anterior or middle portion of the septum, and are not infrequently accompanied by a spur low down and posteriorly, formed by the ridge. The symptoms are chiefly those of nasal stenosis and its attendant consequences. The most serious sequellæ are the loss of the physiological functions of the nasal mucous membranes, resulting in chronic inflammatory conditions of the eustachian tubes, pharynx and larynx, and the end organs controlling smell. In many instances, especially in older patients, the loss of function of the nasal mucous membrane is so complete that nasal surgery may be of no benefit.

The second class of cases probably gives the most trouble in the matter of diagnosis. In many cases there may be little if any deflection of the septum, and what deformity there is, lies high and posteriorly. In some instances, the major part of the pathology is a greatly thickened posterior septum at its junction with the rostrum of the sphenoid. Other cases show an extreme thickening of the posterior septum, which impinges on a small but bony middle turbinate, or an enlarged ethmoidal bulla. Although the pathology in these cases in many instances appears to be slight, it is the frequent cause of severe headaches, neurasthenia, ganglion neuroses, and general ill health. (See "Nasal Headaches", Drs. Wolfe and Wahrer in Iowa State Medical Journal, September, 1922). Few operations are so satisfactory to the patient as the surgical removal of pressure in the posterior septum, although this condition is often overlooked in the average submucous resection.

The third class probably comprises the majority of cases in which submucous resection is indicated, namely, for the drainage and ventilation of the nasal accessory sinuses. The deflection in these cases may be anterior, middle, or posterior, and is usually complicated with pathology of one or both middle turbinates. A diagnosis of sinus infection should be based on (1) a careful rhinoscopic examination; (2) x-ray plates, and (3) the history of the patient's trouble. When the diagnosis is made, the nasal deformity should be corrected, and drainage established. I do not feel however, that such operative work should be done only in cases of chronic sinus infection. We see many cases of acute sinus disease which subside under local treatment. As practically every such case in adults is due to a septal deformity, this condition should be corrected at the earliest possible moment, to prevent the occurrence of subsequent attacks of sinus infection, which in time will cause a chronic sinus disease.

I believe that practically every case of acute sinus infection, can be cured by treatment, and recurrences eliminated by the proper correction of septal deformities, combined with any necessary surgery of the middle turbinates. In a lesser degree, this also holds good for chronic nasal sinusitis. With the exception of those cases in which there is a polypoid degeneration of the mucous membrane of the sinus, almost every chronic sinus infection can be cured by the correction of septal deflections, with subsequent treatment. At this time, I again wish to emphasize the fact that nasal surgery should be followed by a carefully outlined system of after treatment, if the best results are to be obtained.

I feel that at least one month's treatment and observation is necessary after a submucous resection. In many instances, treatment should be maintained for several months.

We have all seen the results of poorly performed submucous resections, and know how nearly hopeless it is to attempt to reoperate them. Therefore, I wish to make a plea for more careful work of this type. I have nothing but praise for the man who can remove tonsils in one minute, especially if the patient is under general anesthesia. But for the operator who boasts of doing a submucous resection in from ten to fifteen minutes, I have no praise. Primarily, there

is no reason for speed in this operation, and secondly, in this length of time, it is hardly possible for any operator, no matter how dextrous, to give to each case the necessary careful attention and study that is so essential in dealing successfully with the individual peculiarities of each nasal septum. It is my custom several times during the course of the operation, to withdraw the nasal retractors, cleanse the nasal cavity and carefully inspect the progress of my work. At the conclusion of the operation, the nose is again inspected carefully with the head in several different positions. It is surprising how many times one finds it necessary to do additional work, after being sure the operation was complete.

In presenting this subject, I have attempted to emphasize four main points in connection with the correction of septal deformities. (1) Be absolutely sure that the patient's condition is due to the septal deflection present, and that its correction will give relief. (2) That by correcting septal deflections and establishing drainage, practically all sinus infections, both acute and chronic, can be cured with the aid of careful after treatment. (3) Every case requiring submucous resection should have at least one month's treatment following the operation. (4) Submucous resections should never be done hurriedly, and the completed work should be carefully inspected. Secondary operations on the nasal septum are seldom successful.

CHOREA*

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Chorea is as old as the hills, but because of the fact that it is so very frequently overlooked by parents until irrepairable damage has been done and because of the fact that it is far too frequently overlooked by the physician, and the close association between chorea and heart disease in children is forgotten, I make no apologies for presenting this subject.

The laity term St. Vitus Dance is of ancient origin, originating sometime in the middle ages and was a form of delirious mania, a widely spread epidemic scattered throughout Europe. The people so afflicted would go to the shrine of St. Vitus to pray for relief from this affliction and as they would dance on their way to the shrine, going through all sorts of muscular contractions, the name of St. Vitus Dance came into being. This of course has no connection with the present day chorea and we will confine ourselves to the symptom complex, described by Sydenham in 1686.

There are a great many names applied to this disease, the most, of which, are misnomers. It has, at various times, been called congenital chorea, chorea gravidum, post-hemiplegic chorea, choreic insanity, electric chorea or Dubini's chorea and chorea major. All of these are misleading applications and should never be used. This is an acute disease and the correct naming should be acute chorea or acute chorea of Sydenham. Chorea Mitus is another acceptable term.

We find this condition much more frequently in girls than in boys, usually in proportion of about two to one, the susceptible age being from the sixth to the tenth year. Many cases, however, occur at the age of twelve or fourteen, the age of puberty, especially in girls. Before the age of four and after the age of twenty the disease is very rare. It is also rare in the dark skinned races of this continent, negroes and Indians being very seldom affected.

The seasonal relations are interesting. According to Lewis, the frequency reaches its lowest curve in November, rises rapidly in December, remains stationary in January and February, mounts still higher—to its acme—in March, falls in April, again rises in May, and then gradually declines to the November starting point. This tracing corresponding with that of rheumatism, the general amount of sickness and climatic vicissitudes.

The etiology is probably as yet not definitely decided upon. The neurotic makeup plays a most decided role, and in my experience I have as yet failed to find a single case of acute chorea without a family history of some neurosis. While acute chorea is undoubtedly not hereditary, yet the hereditary taint is always there, and in a great many instances the mother or grandmother and probably an aunt or so have had either acute chorea or a so-called nervous breakdown. Many of these choreics exhibit some of the stigmata of degeneracy and often give a history of enuresis, infantile convulsions, febrile dilirium, impressionability and mental precocity. Infection plays a very important role in many cases, but I do not believe that anyone can deny that in chorea we have the hereditary tendency.

It is not infrequent to find the parents of a choreic child, either the father or the mother, a user of alcohol, which in itself is a mark of neurosis in the parent.

Many theories have been advanced as to the actual exciting cause, the more common of which is probably the rheumatic. As yet we have not positively discovered the exciting cause any more

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than we have discovered the actual cause of rheumatism, but it is a fact well understood that rheumatism, tonsillitis, chorea and endocarditis are very closely associated. Rosenow advances the theory that it is due to a streptococcus, having probably neurotic properties. He feels justified from his work at the Mayo Foundation in concluding that chorea is due to a streptococcus, although Koch's postulates have not been fulfilled in connection with them. The possibility of producing serum for purposes of immunization at once suggests itself, and attempts in this direction are said to be in progress at Rochester, Minnesota. Cocci cultivated gram-positive micrococci from the blood of four children with chorea. They were agglutinated by the serum of chorea patients and the germ caused encephalitis in a monkey. Herman inoculated rabbits with cerebrospinal fluid from patients with Sydenham's chorea. These experiments disclosed the presence of a filtrable virus, having some anology to the virus of the epidemic encephalitis, but with less virulence. Dulaney reports twenty-three cases of chorea apparently all due to infected tonsils, the removal of which gave complete and immediate relief, which lasted three years. Some believe it is a non-specific infection, others that it is an autointoxication, pure and simple, others that it is an infectious neurotic combined, and others that it is an organic condition. Dr. Laubet advances a theory that it is an organic condition, that it is, in reality, an acute encephalitis.

There is no question but what fright, worry and application to study are many times exciting causes, although fright in itself can hardly be classed as an exciting cause. This was easily demonstrated in the World War. On careful study it has been found that the number of cases of chorea among children were not increased, even though these children were frightened and even terrified many times each day. It is believed that the brain is already in a pre-choreic condition when fright occurred. Church and Peterson state that on close analysis these usually contain little significance and that rheumatism is usually at the bottom of the trouble. However, we find too many cases developing during the school year in young girls, who are probably pushed in their school work, who will very readily be entirely relieved by simply taking them out of school, to pass this cause up entirely. Tonsillar infection is without a doubt a probable exciting cause. Errors of refraction many times seem to be the causes of the condition, as also do anemia and mal-nutrition.

Kerley, believes that rheumatism takes first place in the etiology of this disease. Strumpel, states that it is almost impossible to separate the two. In Sojou's Encyclopedia, Bodurant is very emphatic about the neurotic weakness. He says, "that chorea movements of all kinds are primarily due to inherent neurotic weakness, or instability and that in true acute chorea, (the genuine Sydenham's chorea) the neurotic constitution with the anatomical and physiological stigmata of degeneration can usually be traced."

Some cases may develop without any discovered exciting cause, but most are preceded by mental strain, overwork at school, or because of some infectious state, such as, rheumatism. While undoubtedly I will be challenged in bearing upon the hereditary part of chorea so strongly, yet probably every authority I consulted agreed to this. Kerley, as before stated, believes that rheumatism takes first place in the etiology as the exciting cause, and says, "in a susceptible child the occurrences of stress of any nature may induce an attack, but regardless of nervous shock, there is no chorea without the underlying vice. Overwork at school is to be looked upon as a predisposing cause, as also is anemia or any influence affecting the well being of the child. But such conditions are operative only in favorable subjects."

There is no question but what rheumatism plays a very important role, by that I mean the causative factor of rheumatism, because the organism producing the rheumatism is undoubtedly the exciting cause of the chorea, the same as it is the exciting cause of rheumatism, but if every child, who develops rheumatism and therefore had the causative factor in their system, how many would escape chorea?

Poynton and Holmes have advanced the theory that chorea is a meningo-encephalitis of rheumatic origin, and Greenfield and Walfshon had a necropsy in a child, seven years old, who had died of chorea, in which were found inflammatory changes similar to those of epidemic encephalitis.

Roger and Simon are strongly inclined toward the rheumatic theory, while Charcot strongly opposed this. Triboulet maintains that it is a non-specific infection and chorea is always preceded by some acute condition, but that the predisposition of a nervous nature must be present. Charcot, Joffroy, Comby, Leroux and Blocq supported the neurotic theory. Kraft Ebing asserts that there are two forms, the infections and neurotic. The more recent theory is that chorea is an organic disease. This theory is advanced by

Thomas, and later by Tinel, Babinske, Huntinal and Strumpel. They base their opinion on their post-mortem findings, believing that they have established the fact, that in all cases of chorea you will find some organic lesion, such as, meningo-encephalitis, hyperemia, embolism, hyperplasia and cerebral sclerosis. The lesions that are actually verified are acute encephalitis, small hemorrhagic points, perivascular edema and leukocyte infiltration, associated with fine cellular lesions.

Macalister divides choreas into three groups: (1) the ordinary: rheumatic or toxic type; (2) "stock-brained" cases, related to an inherited tendency, and (3) a climacteric type. There is often little to distinguish these cases so far as the movements of incoordination are concerned, but some of the associated phenomena present considerable distinctions. The interesting fact was revealed that in the so-called "fright" choreas the children were sometimes left-handed or, being right-handed, came of a left-handed stock, whereas, the rheumatic children presented this sort of history in a very limited number of cases. In a few instances children suffering from a stock-brained chorea have been from families in which there were stammerers. The choreic movements probably represent a gross motor ataxia or incoordination which may be regarded as analogous to vocal stammering.

P. Harvier and C. Levaditi have drawn these conclusions: (1) Some cases of acute febrile chorea are caused by the virus of epidemic encephalitis. (2) It has not been proven that all cases of acute febrile chorea are due to this pathogenic agent. (3) It is possible that Sydenham's chorea in infants is, in certain cases, due to the virus of epidemic encephalitis, but this has not yet been demonstrated.

Dr. Conte says that he has always found a history of hereditary nervous disorder in his cases, such as, alcoholism or nervous manifestations. On the other hand in all of his cases there was an infection or intoxication present. This intoxication nearly always being derived from chronic gastrointestinal disorder. All physicians who have had experience in nervous diseases know the effect of digestion on their nervous disposition of predisposed nervous individuals.

Graves and Page state, "that it is possible that acute chorea is due to the action of bacterial toxin, perhaps a selective action on central nerve cells in persons with inherited nervous instability makes them more readily subject to such toxic action."

Jacob Diner's conclusions are: (1) Pathological research has fairly well shown that chorea can be considered as of bacterial origin. (2) While a focal source of infection can not always be demonstrated or illicited from the history, a good many patients do give a history of previous infection. (3) The anti-serum treatment has been successful in probably all cases and deserves further investigation.

Hans Curshmann says, that chorea is based upon a predisposing neuropathic constitution and may be precipitated in the case of adults, by various factors, such as, pregnancy. The form affecting children corresponds to polyarthritis, it is frequently complicated by endocarditis, occasionally by paracarditis and sometimes articular rheumatism. It may also occur in scarlet fever, diphtheria, measles and other diseases.

Faulkner and White, in the "A. M. A. Journal", state (In the study of the relationship of social status to the incidence of rheumatic fever and chorea, we have found that the rheumatic infections are apparently less common among the so-called upper classes of society. We have communicated with a large number of private preparatory schools and colleges throughout the country, and all attest to the rarity of the rheumatic infections and heart disease in this comparatively well-to-do group). This, to me simply means, that the better class of people look after their children better, have their teeth and tonsils attended to earlier, raise them in more sanitary surroundings and thus prevent the rheumatic infection, chorea and heart disease.

In the great mass of literature these many theories are confusing. Personally, I do not believe the organic theory has been substantiated at all. Neither do I believe that there is a true infectious form, but that the infection is only the exciting immediate cause. Every authority which was consulted, without exception mentioned, a neurotic tendency and when you have this neurotic taint, with a superimposed infection, probably the same organism which causes rheumatism and endocarditis, we are apt to get chorea, but we have too many cases of chorea without any history of infection, to classify any of them as pure infection chorea. It is undoubtedly true that the same organism is concerned in the production of tonsillitis, rheumatism, acute endocarditis and chorea, but this organism, as yet, has not been definitely isolated.

To sum up, then, the etiology of chorea, we may say that the child must be a susceptible child, in other words, there must be a hereditary tendency. Then, with this hereditary tendency, infected tonsils, over-study in school and a history of rheumatism, we certainly have a proper subject for chorea. In addition to this if we have

anemia, mal-nutrition, unhygienic surroundings and climatic conditions, the etiology is complete.

I wish to cite three of my own cases, picked at random, which bring out the hereditary neurotic tendency.

Case 1. Girl twelve years of age, never before sick, a Russian Jew, born in Russia. Parents, while in Russia, were extremely poor and from what I could gather from them did not at all times have sufficient food or clothing. An older sister had some disease in Russia, which the parents could not name, but on inquiry undoubtedly was a case of chorea. The grandmother died in an insane asylum. One other sister, older, was, we may say, very peculiar. She did not mix with the rest of the family, did not care to go out in society and spent the greater share of time sitting around the house doing nothing. The mother showed the lack of proper nourishment in early life, was neurotic, emotional and given to violent attacks of temper. The case was cured after the removal of tonsils and the administration of arsenic.

Case 2. Girl eight years of age, very bright, precocious child, who was being pushed in school. The mother is a very odd woman and this one girl couldn't seem to get along with her teacher. The mother interviewed me in regard to changing the girl from one school to another, because, as she said, the teacher picked on her girl. An aunt is a very devout follower of Mrs. Eddy. The only thing the mother noticed about the child was that she was nervous, high strung, apparently could not keep up with her class and this was all laid to the teacher. The girl was sent to me by another physician to corroborate his diagnosis of chorea, which was very positively confirmed. She was taken out of school for a few weeks, put on arsenic and then sent over to the other school, where fortunately the teacher greatly favored the girl, helped her with her lessons and did not push her and was very kind to her. This patient made a perfect recovery.

Case 3. Girl sixteen years of age, who was rather old for acute chorea. In getting her history I could find nothing in her family of neurotic taint, but upon talking with another physician he stated that her mother was the most peculiar woman that he had ever met. The mother has the idea that she can't live in Iowa, consequently, she and the girls live in another state, while her husband lives in this state. This girl, while still under observation, is taking large doses of arsenic and is improving rapidly. She is a little different than a great many cases of chorea, in that it is apparently a right sided affair, the right arm and right hand being affected most, but upon close examination the ear marks of chorea are pronounced. The inability to keep up continuous muscular exertion, the lack of strength, the peculiar movements of right arm and hand and on close examination it is found that the movements are not confined strictly to right side. She is restless, high strung, emotional and cannot sit still for more than a minute at a time.

All of these cases, to my mind anyway, show the neurotic taint in the ancestry and I believe that if every case was thoroughly studied we would find the taint always.

The pathological findings in chorea are as yet of no definite consequence. Sachs says that the pathology of chorea is still a great mystery. You can find some authority such as Loubet, who states that there is a definite pathological lesion in nearly every case of chorea, greatly resembling acute encephalitis, but in going through the literature the concensus of opinion agrees with Sachs, that the true pathology, if any, is not definitely known.

The onset of the acute chorea may be sudden or insidious. Many cases start in with a slight difference in their actions and mothers will note that the youngster acts, we will say, a little peculiar. Often times they are peevish, obstinate and easily displeased. Perversness and moral obliquities sometimes appear. The child may show a forgetfulness in school, becomes inattentive and unable to get her lessons as easily as formerly. Sleep is often disturbed and broken and if the child is corrected at school or at home there is many times unusual depression or capriciousness.

Because of the fact that chorea develops in the bright precocious child many times over-study is often blamed for the disease, and right here let me say that it is these precocious children, who instead of being pushed forward and allowed to jump classes, should be held back and retarded in school work.

This prodromic period may last several days or several weeks and should be very carefully noted in history taking as a warning of subsequent attacks. Again, chorea may come on without these prodromal signs and the first thing noticed is the motor manifestations. These motor manifestations, as a rule in early stages, are very slight. They consist of an occasional, sudden, unwilled slight movement. The child is often unable to hold articles as easily as formerly and drops things, and many a child has had a severe thrashing for breaking some prized piece of glassware when, in reality, it was the chorea which broke the glass.

The greater per cent of chorea comes on with the prodromes and if mothers would only pay a little more attention to their children's habits, I believe that most cases of chorea could be checked before the violent motor features become manifest.

These youngsters often complain of tiredness and pain in joints and limbs and frequently loss of appetite and constipation are noted. These

chorea movements are usually manifest in the hands and forearms, first, occasionally, it is a sudden twisting of entire body, again it is simply the inability to sit still or stand still, one side usually being more markedly affected than the other, occasionally, however, both sides are equally affected. The affected muscles usually show three important functional modifications: (1) unwilled but conscious twitching or spasm; (2) inability to maintain steady contraction, and (3) loss of power.

One point to be remembered is that usually during sleep these movements cease. Mitchel and Rhein classify chorea into five varieties: (1) cases which show at some state or throughout attack an absence of movement during rest; (2) cases with continuous movement during rest but increased by intentional effort; (3) cases with severe chorea movements entirely disappearing during muscular actions; (4) cases in which the movements are unaltered by muscular efforts; (5) cases presenting several of these phases at different times.

The face is rather infrequently affected, but occasionally we have the bilateral grimace and at times affecting the lips and tongue so as to affect the speech. At times even swallowing becomes difficult, often when these patients are asked to protrude their tongue they have great difficulty in doing so and cannot keep tongue protruded more than a second.

The hands are probably the more commonly affected than any other part and in many cases the only thing noticed will be an irregular movement of one or both hands. At times the lower extremities are affected, the same as the upper, which causes the gait to be peculiarly disturbed and it is these cases which so greatly resemble the old St. Vitus Dance.

Occasionally the thoracic muscles of the diaphragm are affected, causing noises as grunting or clucking sounds. Another point to be born in mind is the inability to grasp the physician's hand with any degree of firmness, producing the so-called inequality of pressure. Loss of muscular power is practically always present and easily demonstrated. The muscular weakness is many times parallel with the mental weakness. The hand-writing is usually affected, Russell describes five types: (1) the neurotic chorea handwriting; (2) when it may be very good even when chorea disturbance is well marked; (3) may be almost impossible although chorea movements be very slight; (4) may be entirely unintelligible but control of brain is good; (5) may be pure motor agraphia. The sphincters are never affected except in extreme cases. Sensibility is usually normal and any considerable change should cause a suspicion of hysteria rather than chorea.

The electric excitability of nerves and muscles are often increased. Swift describes the chorea voice, meaning that the patient cannot sustain the voice of the open "a" (ah). He also describes what he calls a "hung-up knee jerk" where the patient, on tapping the knee the foot will be elevated, and many times held in that position for several seconds. Loss of flesh is common, but localized muscular atrophy is seldom found. The knee jerk is often irregular and hypersensitive, otherwise the reflexes are unaffected.

There are, many times, marked mental disturbances shown in this disease. These, of course, are usually of the temperamental, moral and affected changes so common in the prodromal stage, but other mental disturbances occasionally occur. There are at times changes in the facies and the patient will present an inane or stupid appearance, markedly different than the normal expression of the child. Hallucinations of sight are frequently noticed, but hallucinations of other senses rarely.

In severe cases we have the choretic status, when the temperature is elevated and the muscular activity at its height, then delirium of the hallucinatory character is often present. Occasionally we encounter various forms of other psychoses. The heart is frequently affected, probably due to the exciting cause, we will call it of the rheumatic germ, and we often encounter all forms of heart changes. Functional murmurs are very common, associated many times, of course, with anemia. Organic murmurs as a result of endocarditis, are not rare, and an altered rhythm is common. Many times these heart symptoms persist even after the cessation of the disease.

In chorea the general state of the patient, of course, is reduced. There is usually a physical depression, anemia, loss of appetite, indigestion, constipation, dryness of skin. There is usually no fever unless it is accompanied by endocarditis. This disease is marked by exacerbations and remissions in the majority of cases and after reaching various stages of severity, there is a gradual decline. The average duration is from six weeks to four months, many cases last only two weeks, while others run along eighteen months. The common termination is recovery, although death does occur in various instances, usually from some complications affecting the heart.

Chorea has been known to become chronic and may be followed by habit spasm. Recurrences are so common as to be almost expected, many

patients showing a recurrence every spring. These recurrences being more persistant in females than males, and it is by getting a careful history at the prodromes, at your first examination, that you will be able to instruct the mother, so that she will be able to tell when the chorea is just starting.

There are several types of Sydenham's chorea mentioned, the most common of which are: (1) grave form; (2) the gestational, and (3) paralytic. The grave form, of course, is simply the very severe type which we very seldom see now and usually develops into the so-called chorea status. It is in this type that we have our mental symptom most pronounced, at times mania with delusions and hallucinations. These cases, however, probably always show a bad heredity and it is probable that the chorea is only the exciting cause of the insanity, which would probably develop in this patient under any severe strain.

The chorea of pregnancy usually appears in the young primiparæ, usually, during the first half of pregnancy and there is usually a history of former chorea. When it once develops it usually continues until the uterus is emptied and may continue during lactation. It is much more serious than the ordinary form and terminates in death in about 20 per cent of cases. In some patients it recurrs with each pregnancy.

Paralytic chorea called, "Limp Chorea", by the English writers, is probably more frequent than reports would indicate. In this form the paralytic element is dominate and the choreic movements are insignificant. It is more frequent in the young, at about six or seven years of age and in these cases the infectious predisposing cause is most common. A monoplegic, hemiplegic or paraplegic disturbance may be present, but monoplegic most common. The muscles are toneless and the reflexes abolished, there is, however, no reaction of degeneration and the outcome is usually complete recovery. The diagnosis is usually extremely simple.

Some of the things which may be confused with chorea are the rhythmic tremblings of metallic, and toxic poisoning, of hysteria and of multiple sclerosis. Fridreich's ataxia, athetosis and post hemi-plegic chorea are at times mistaken, but they all have the cerebral signs. Tics are much more sudden and are seldom confused.

Huntington's chorea almost invariably has a family history, comes on after adult years and is attended by progressive dementatia. When the premonitory symptoms for a given case have been made out their reappearance often enables an early diagnosis of a recurrent attack, even before the motor symptoms are prominent.

As we stated before, the prognosis is usually good, complete recovery, as a rule, in children under ten. In the older patient the prognosis becomes more guarded with advancing years. Recurrent attacks are frequent and as a rule the prognosis is always affected by the presence or development of cardiac symptoms. The chorea status and the chorea in pregnancy are grave conditions and the prognosis should always be guarded.

The treatment of chorea is of very great importance and it is the early treatment of the case which either gets results or does not. Rest is probably the most important thing and in severe cases the patient should be put to bed under the care of a trained nurse. This is only necessary in extreme cases and it is only because of poor management or ignorance on the part of parents that we see these extreme cases now-a-days. There are individuals who, while seemingly needing the actual bed rest, are so constituted that it is practically impossible to keep them in bed. These patients will do much better by being allowed to be dressed and then lie around on the couch or hammock.

All forms of excitement should be positively prohibited. Entertainment of any sort, dancing, motion pictures, parties or extra company. The child in school should, of course, be taken out of school immediately. Exciting stories or books should be prohibited. Change of climate or scenery often does wonders. A trip to the seashore or up in the woods for a month or two, will, in mild cases affect a cure without further aid. Moderate amount of exercise is, of course, permissible in most cases, but not up to the point of fatigue. Twelve hours rest in bed, out of twenty-four, should be demanded. All focal infections should be cleared up, especially infected tonsils, teeth or sinuses. When the patient is known to have a chronic appendix or gall-bladder, they should be removed. In many instances removal of the foci of infection alone will cure the chorea.

Because of the fact that rheumatism and chorea are closely associated the anti-rheumatism treatment is often suggested. And here I might say that chorea is often the first manifestation of an exciting rheumatism. Sodium salicylate and sodium bicarbonate being given in large doses. For a child from six to ten you may give from five to ten gr. of salicylate and bicarbonate every four hours. Give them plenty of water and after five days treatment, then a rest of three or four days.

Arsenic is probably the most used drug and is still the standby of most of us. Given properly

you may affect a cure in almost every case, by the use of Fowler's solution, given in drop doses in a wine glass of water after meals, starting in with one drop and increasing it a drop a day. For instances, give a drop after breakfast, one after dinner and one after supper, the first day. The second day, one after breakfast, two after dinner and one after supper. The third day, one after breakfast, two after dinner and two after supper and the fourth day two drops after each meal. Keep this drop a day increase up until your patient has taken from six to fifteen, or even twenty drops, three times a day. The mother should, of course, be cautioned in regard to arsenical poisoning, such as, discharge from nose, watery eyes, a tingling or numbness around the mouth and a tingling or numbness in fingers. Should any of these symptoms arise, the mother should be instructed to stop the drops at once, give the child a rest of forty-eight hours and then start in with the one drop three times a day. It is always well to keep in mind that arsenic is a poison and you can get serious results from over doses. Dr. J. W. Stevenson of New York, reports a case of polyneuritis, following the administration of Fowler's solution in a case of chorea. Up to the time of his article in the A. M. A., the patient had been under treatment a little over six months for the relief of polyneuritis and was showing a slow progressive improvement. In addition to the medicine and the rest, every care should be taken to put the child in as good physical condition as possible. Attention to the bowels, regular and frequent baths, plenty of fresh air, etc. The diet, in those cases in which autointoxication seems to be the cause, should be very carefully regulated. A strictly vegetarian diet, with the absence of spices and fried foods, should be insisted upon.

Dr. DeCapite, reports good improvement after sub-arachnoid injections of 10 or 15 hundredth gm. of a 25 per cent solution of magnesium sulphate. The first injection cured chorea in one of the three cases he reports, the others requiring from five to seven injections, given on alternate days. In another series, he injected 2 c.c. of the 25 per cent solution inter-muscularly on alternate days, until the choreic movements subsided. In two children the chorea disappeared after three injections, in two others, it required from seven to nine injections.

Dr. Marinesco, of Rome, has treated four cases of chorea by the inter-spinal injection of magnesium sulphate. Dr. Cavalieri opposes this method of treatment, because of danger to the patient, especially the danger of paralysis of the respiratory center. He has obtained excellent results by the subtaneous and inter-muscular injection of magnesium sulphate. He used a 25 per cent solution of the purest magnesium sulphate in distilled water and injected 2 c.c. of this solution two or three times in twenty-four hours.

Dr. Esau applied a Bier constricting band to the neck, in treatment, in two cases of severe recurrence chorea and in four primary cases. In two or three weeks the choreic movements nearly all subsided, four weeks were required for this in the case of a girl age thirteen years, this was a seventh occurrence of the chorea other previous occurrences lasting four to five months.

The advocates of the rheumatic theory, of course, give large doses of sodium salicylate. While this treatment will relieve the rheumatism symptoms it does not seem to have much effect on chorea. As before stated, arsenic stands at the head of all forms of treatment under the name of Fowler's solution.

Salinger, reports a case in a girl ten years of age, in whom he used salvarsan, affecting a cure in fifteen days. Only one injection was necessary and it was the only treatment employed. Lurieu reports a case of a girl eleven years, who was cured in eighteen days by three rectal injections of salvarsan, giving 0.20 in 150 gm. of distilled water. This simple, harmless form of treatment deserves some investigation. Arsenic acid is used, but I can see no advantage over the Fowler solution.

Dr. F. John Poynton, gives some valuable points, in regard to chorea, to parents and they might well apply to physicians. They are as follows: (1) a sore throat with pains in the limbs needs instant care; (2) vague pains, often called growing pains, should suggest a beginning of rheumatism; (3) rheumatism is probably likely to occur in autumn, winter and spring, when there are sudden changes in temperature; (4) heart disease is the great danger of rheumatism, this need not cause any pain, but often causes restlessness, weakness and anemia; (5) chorea is almost always a sign of rheumatism, nervousness, dropping things and alterations in disposition may be warning of its approach; (6) damp boots and clothes and damp rooms are highly dangerous to the rheumatic; (7) heart disease requires great patience and much time for its treatment.

PERIODIC HEALTH EXAMINATION*

H. E. Kleinberg, M.D., Redfield

Some one has said, "There is nothing new under the sun". Time and again this saying has proved out axiomatic. In our medical school days, physical diagnosis and examination was commonplace, and not a new idea. So today, physical diagnosis invests itself in a new garb, qualifies itself, and to our attention is brought, "Periodic Health Examination".

In 1870, Dr. Dobell, in England, suggested periodic examinations for insurance companies. About 1906, Dr. Bares, a Frenchman, again urged them. In the United States, Dr. George M. Gould, of Philadelphia, contributed to the Journal of the American Medical Association a paper on "Personal Biological Examinations". In 1909, to the Association of Life Insurance Presidents, Dr. Burnside Foster recommended periodic examinations every five years; which recommendation in a short time was adopted by the larger insurance companies. In 1914, the New York Health Department adopted the idea and applied it to its employes. Then, in 1922 and repeating in 1923 and 1924, the American Medical Association went on record as favoring periodic health examinations of the apparently healthy individual.

Every business organization has an annual inventory or stock-taking. After every prolonged run, the engineer carefully goes over his engine; and so in every line of endeavor, the integral parts are watched for loss and wear. Is it not advisable to do this of ourselves and for ourselves too?—to check up and take stock of our own health organs? Time and again some applicant for life insurance has come to us for a physical examination saying, "Doctor, I know I can pass—I haven't been sick since I was a baby". But wait, that urine showed albumin or a few casts, or pus cells; or the blood-pressure was abnormally high; or the heart sounds were roughened; or a wee murmur projected itself to the axilla—and our man of certainty became one of handicap, and his policy either was not issued or contained a restricting clause.

Periodic health examination is the natural outgrowth of public health. The tremendous amount of defects and handicaps in so-called healthy persons was never so strikingly shown us as during the past war. To the draft boards and army camps came the physical cream of our male population—those between twenty-one and thirty-one years of age. Thirty-five per cent of the total examined were found to be defective. Of this number, about a fourth could be improved by remedial measures and made fit; and the remaining 25 per cent were unfit at all or could do only very restricted service.

Preventive medicine has accomplished much in its field. Infant and child mortality has been markedly decreased by maternal hygiene and the successful combating of the contagious diseases. The pestilent diseases, as typhoid, plague and yellow fever, are about wiped out. Tuberculosis is slowed up and may be halted. The span of life has been increased about fifteen years, due to these early preventive measures. Now let us go further in this work, to the people in the middle age, where the mortality rate is yet too high; and there to combat the ravages of the degenerative diseases such as of the heart, the circulation, the nephritides, the carcinomata, the focal infections and their associated complexes. The insurance companies were quick to see the possibilities of financial gain from this procedure, and one company made a profit of 200 per cent in five years on its investment in this work, cut down the expected mortality to as much as 50 per cent in some groups, and gained profits by the additional premiums paid.

The methods for these periodic health examinations of course are varied. But, in order that uniformity throughout this country be maintained, I do urge the use of the manual and examination blank as perfected by Dr. Haven Emerson and a committee for the American Medical Association. It takes up (1) a complete history, including family and personal history, habits of eating, living, and working, and of home and work environment; (2) the physical examination of the various systems of the body, including temperature, pulse, respiration, weight and height; (3) urine examination; (4) hemoglobin percentage; (5) Wassermann test; (6) systolic and diastolic blood-pressure; (7) a space for x-ray examinations of teeth, chest, or other portions; and finally (8) the summary and advice given.

The purpose of these medical examinations is to bring to light latent or undiscovered health problems, and to suggest the appropriate remedy. The recommended remedies must be followed out within a reasonable time or the effect of the examination is rendered worthless. And here let me add a few words of advice from Dr. Frank Billings who says that: "the first examination of an individual will be the important one for him and the physician too, for the result, if satisfactory, will be likely to make him a promoter of the periodic medical examination with his

*President's Address, Dallas-Guthrie County Medical Society, January 21, 1926.

friends and neighbors; or if unsatisfactory to him, may make him an obstacle to the success of the program in that local community".

To the general practitioner will come these patients. Their sickness costs this country about one billion dollars a year. If we saved only 10 per cent of this by periodic examinations, it would save one hundred millions in money, much more in suffering, and an incalculable amount of time in business enterprise.

The slogan is "Have a physical examination on your birthday", and it is up to us in these agricultural communities to back it up, get posted and put it over. We must do this or it will be taken up by commercial health organizations and individuals. Each physician can be sponsor and educator in his community in this program, and teach the people to come to him for these examinations and advice. In the East, group sponsorship was tried but in the final analysis the task devolved upon the physician himself to put over the program successfully. It can be done by cooperation, by talks to the individual, by talks to the various clubs, churches and other organizations.

Tobey says, "The quest for health is more alluring than the search for any of the world's treasures. Health is the normal ideal condition of that physical mechanism we call the human body. The human machine is the most precious of them all, a fact which the public is beginning to realize. The future will see the day when that realization is translated into an active interest". Then indeed will the slogan, "Have a physical examination on your birthday", become a traditional maxim of the realm. That is after all the most valuable present which can be bestowed. It is the gift of life itself.

DR. F. H. McMECHAN TO ADDRESS KANSAS CITY CLINICAL SOCIETY

Dr. F. H. McMechan of Avon Lake, Ohio, will address the Kansas City Clinical Society on "The Evaluation of Surgical and Anesthetic Risks from the Viewpoint of the General Practitioner".

Dr. McMechan is secretary general of the Associated Anesthetists and executive secretary of the International Anesthesia Research Society and editor of its official organ, Current Researches in Anesthesia and Analgesia, the only American publication devoted to this specialty.

During the past twenty years Dr. McMechan, with the cooperation of his Fellows in the specialty of anesthesia, has been a leading factor in the nation wide organization of the Associated Anesthetists of the United States and Canada and its regional societies.

The Mid-Western Association of Anesthetists is holding its sixth annual meeting in Kansas City during Clinical Society week.

One of the principal activities of the anesthetist's program is the effort of the International Anesthesia Research Society to prevent needless deaths through the mechanism of a safety-first uniform anesthesia chart. The essentials of this chart are: (1) The determination of surgical and anesthetic risk before operation. (2) Five-minute blood-pressure guide and protection during the entire operative period. (3) Remedial therapy and after-care based on the degree of circulatory depression.

According to Dr. McMechan, "Even in this, the fourth era of surgery, the general practitioner is still all too often called upon to answer the challenging jibe—'The operation was a success but the patient died!' Hence, the necessity for some routine way in which the family doctor, for his own guidance and his professional advice to others, may determine a given patient's fitness for operation and more accurately forecast the probable result."

In his lecture, Dr. McMechan will illustrate all his points by means of lantern slides showing the latest information on the classification of operative risks and comparative death rates, as well as the scope and utility of such diagnostic and prognostic tests as Moots' index for operability, the degree of circulatory depression, the never shock index, the energy index, Grover's blood-pressure key, and his interpretations, the breath holding test and vital capacity, Cornell's test for disclosing incipient nephretics, McIntyre's test for vagotonia and sympathicotonia, and the collected results of these tests put to routine use in good, fair and poor operative risks in a surveyed series of cases.

From the data that has become available as a result of this safety-first movement, Dr. McMechan is convinced that the family doctor can readily evaluate the patient's basic reserve vitality even before referring the case for operation and can use this evaluation to forecast the probable outcome very accurately. Surgeons and anesthetists may also use these routine tests for further protection of operative patients.

A GIFT OF MRS. MONTGOMERY WARD TO THE NORTHWESTERN UNIVERSITY

The trustees of Northwestern University announced March 13th that Mrs. Montgomery Ward had made another gift of $4,000,000 for the purpose of enabling the University to obtain the highest quality of personnel for the instruction and research staff of the medical and dental schools. About two years ago Mrs. Ward gave $4,000,000 for the erection and maintenance of the Montgomery Ward Medical Dental Center.

The Journal of the Iowa State Medical Society

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THE SHEPPARD-TOWNER ACT

The Sheppard-Towner Act is now coming up with new interest, the proponents of the act are insisting on further federal appropriations to keep the work alive. When the law came up in the first instance it was generally opposed by the medical profession as an interference with State affairs, as to health and sanitary measures and led to confusion in State health activities. It also appeared to many, to be an undue interference with the duties of the practitioners of medicine, and that this kind of legislation would ultimately lead to lay control of medical practice.

It was admitted that maternal and infant mortality was too high but how a lay control under federal legislation would be able to remedy the matter was not clear or seriously believed by physicians and health agencies.

The various medical organizations over the country have been, and are now, actively engaged in health measures covering all classes of people and it should be assumed that trained medical practitioners and health officers would be better qualified to protect mothers and infants against disaster than "workers".

It was one of the unfortunate sequelæ of the war that a multitude of welfare agencies should spring up for one purpose and another, and through an emotional outbreak in Congress great zeal was manifested to protect the mother and child from an assumed danger that did not exist. That improved conditions may be established in maternity matters is probably true, but the same may be said of all and every other activity. We sincerely believe that the health and sanitary work can be safely trusted to the agencies of the state touching all classes and conditions, without calling in the federal government. If the health machinery of the state is inadequate and if the medical profession cannot be trusted to care properly for, and advise the patients and families who trust themselves to the doctors of the state, these same proponents of the Sheppard-Towner Act should exercise their influence in correcting the alleged unfortunate condition fundamentally. But some would say that there would be no money in such a course, it would lack the incentive of a nice little fund to be divided among "workers".

As the period of extension of the Sheppard-Towner Act is before Congress we are presenting an abstract of the comments of many medical journals, so that the medical profession may exercise a watchful care over their interests. If they do not, the burdens of practice may become intolerable.

THE SHEPPARD-TOWNER ACT: ITS PROPOSED EXTENSION AND PROPOSED REPEAL

In support of pending legislation to authorize appropriations to carry the Sheppard-Towner Act into effect for two years beyond the date originally set for it to expire, it is urged that this is merely a temporary expedient, designed to prevent the loss of the money and effort already expended under the Act. The record shows, however, that is not the case. The extension of the Sheppard-Towner Act now sought, for two years only, is merely one of a series of extensions that will be sought if this extension be granted. In fact, proponents of the Sheppard-Towner plan regard the Act as permanent legislation.

It could not well be made clearer that the proponents of this legislation expect to keep the Sheppard-Towner plan as a permanent part of our federal organization. But whether they do or do not plan to go that far, it is clear that they have no intention whatsoever of abandoning the scheme at the end of the two-year extension they now seek.

Attempts to justify an extension of the life of the Sheppard-Towner Act by showing the extent of activities in the field of maternal and infant hygiene since that act was passed are inadequate unless they show the results of such activities, and this they do not do.

The assertions that have been made that there have been substantial reductions in infant and maternal mortality, with the implication that such reductions have been due to the Sheppard-Towner Act, are not supported by the evidence.

Statements made to show the extent to which infant and maternal mortality are preventable, in support of an argument for the enactment of the pending legislation, are without adequate foundation.

Comparisons between maternal mortality in the United States and maternal mortality in other countries, to the discredit of the United States, are not justified by comparable records.

Even if it could be admitted that infant and maternal mortality rates were as bad as the proponents of the pending legislation assert, and that it is as easily reducible as some of them claim, there is no evidence to show that preventive measures can be applied more effectively by the federal government than by the state.

The Sheppard-Towner Act authorizes federal appropriations to stimulate and aid the states in protecting and promoting the health of mothers and infants. It denies aid, however, to every state that will not subject its activities to the supervision and control of a federal bureau and a federal board and that will not appropriate from the state treasury money to match the federal subsidy. If the state's plans for hygiene of its mothers and infants are not pleasing to the federal board, no federal funds are forthcoming. If the federal board does not like the way the state is carrying its plans into effect, the board can discontinue federal aid. Each state must determine whether it will or will not accept the proffered subsidy and submit to federal supervision and control. Connecticut, Illinois, Kansas, Maine and Massachusetts have steadfastly refused to do so. The federal government is represented in the case primarily by the Children's Bureau, a lay bureau in the Department of Labor. The chief of that bureau, however, functions also as a member of the Board of Maternity and Infant Hygiene, her comembers being the U. S. Commissioner of Education and the Surgeon General of the U. S. Public Health Service. The administration of the act is entrusted to the chief of the Children's Bureau, the board having authority merely to pass on the adequacy of state plans and activities.

In recent hearings before the House Committee on Interstate and Foreign Commerce, as in all other propaganda in support of the Sheppard-Towner Act, one looks in vain for facts and figures showing a reduction in maternal and infant mortality through the operation of the act. The best way to pass on the merits of the pending legislation to extend the act or to bring about its repeal seems to be, therefore, to examine the arguments commonly offered in support of the Sheppard-Towner plan.

In support of the Sheppard-Towner plan it is commonly urged that maternal and infant mortality in the United States is excessive, as compared with maternal and infant mortality in other countries, and therefore must be reduced. The comparisons offered by the proponents of the Sheppard-Towner plan, however, to show such excessive mortality in the United States do not justify the conclusion that such mortality is higher than in other countries; nor if it be higher, that such mortality in the United States can be reduced to foreign standards by legislative action, nor that the needful legislation could be enacted by the federal government more effectively than by the states.

The Sheppard-Towner Act arbitrarily assumes that maternal and infant hygiene present the supreme problem in health administration. It allots to each state as an available subsidy an amount arbitrarily determined by Congress, based on the total population of the state, disregarding all other health needs and all limitations on the resources of the state to meet such needs. The health activities of every state, however, extend into many fields. Adequate water supplies and sewer systems must be provided. The food supply must be supervised and controlled, particularly the milk supply. The spread of communicable diseases must be prevented. Swamps must be drained to prevent malarial fever. Some states must contend with the hook-worm problem; others need not. School hygiene is of vital moment everywhere. The hygiene of maternity and infancy presents but one of the state's many health problems. No state, however, under the Sheppard-Towner plan, can determine unbiased the relative importance of its various health problems and allot to each the money the state should rightly give to it on account of its inherent importance. Its judgment is warped by the proffered subsidy.

The Sheppard-Towner Act provides certain arbitrarily fixed federal bonuses that are distributed equally to every state that submits to the act. It provides other payments computed on the basis of the relation of the total population of the state to the total population of the United States. Neither of these distributive schemes has any logical relation to the needs of the state with respect to maternal and infant hygiene. The work to be done relates to infants and their mothers. The number of births recorded annually would

therefore have come nearer to affording a rational numerical basis for distribution to the fund than would any other available figure. Incidentally, the distribution of the Sheppard-Towner fund on the basis of recorded births would have been a most effective method of stimulating birth registration. Some states, however, have been blessed with climates and with racial distributions of population that have prevented any serious infant mortality problem from arising, or else such states have through their own efforts gone a long way toward solving such problems.

The purpose of the Sheppard-Towner Act is presumably to increase state appropriations and state activities for the lowering of maternal and infant mortality. The subsidies provided by the act, however, do not necessarily accomplish that end. Such subsidies are presumed to be matched equally well against appropriations that were regularly made before the Sheppard-Towner Act was passed. The mere reallocation of items in a state budget can produce an apparent increase in the appropriation for maternal and infant hygiene and in that way procure an increased Sheppard-Towner subsidy, without any increase whatever in the state's activity in the field of maternal and infant hygiene.

The extent to which Sheppard-Towner Act produces increases or decreases in maternal and infant mortality cannot be determined by a study of mortality rates alone. It must be shown by other evidence that but for the passage of that act such increases or decreases would not have occurred.

Maternal and infant health work cannot be separated from health work generally. If the government maintains supervision over maternal and infant health work in the states, it must ultimately gain control over all other health activities; otherwise there may be wasteful duplication of effort and a possible working at cross purposes by the federal and state agencies.

The Sheppard-Towner Act involves a wasteful and unwise duplication of effort in federal health activities.

The work done under the Sheppard-Towner Act is primarily medical work. The United States government has a highly organized Public Health Service for the execution of such work, under competent medical direction. The Children's Bureau, which is charged with the execution and enforcement of the Sheppard-Towner Act, is a lay bureau. For such medical supervision as it exercises it has to employ physicians, and even then, in last analysis, the work of such physicians and of all physicians employed by the several states under the Sheppard-Towner subsidies, and all medical work whatever done under the act, is under the direction and control of the lay chief of the Children's Bureau.

The proponents of the Sheppard-Towner Act claim that the interest of the federal government in mothers and babies justifies it in subsidizing in their behalf state health activities and in taking over the supervision and control of them. If so, the interest of the federal government in persons of other ages obviously would justify it in providing subsidies in their behalf and in taking over the supervision and control of health work for them also.

An unsuccessful effort was made in the Senate, June 15, to bring up for passage the bill to extend for two years the provisions of the Sheppard-Towner Infancy and Maternity Law. Final action on the bill is thus deferred; and it is doubtful whether the bill can be passed within the brief period remaining of the present session of Congress. (Congress adjourned without acting on this bill.)

INCREASE OF THE UNFIT

The recent address before the Northwestern University School of Medicine by Dr. Charles H. Mayo has attracted much favorable notice. The facts presented by Dr. Mayo have been known for a long time but it needed the strong personality and the forceful presentation to bring these facts home to a rather thoughtless public. We often speak in somewhat boastful terms of the twelve years added to human life by better and more scientific methods of living without much thought as to which end of life the saving occurs.

It was not the purpose of Dr. Mayo to point out the diseases of matured life which have failed to give equal results in life extension; he had in mind the general economic facts as to the effect of better health measures in preserving the lives of the more unfit members of society.

In earlier days the lack of health and sanitary measures brought about a loss of life to the more unfit who generally disregarded health measures and in their ways of living favored an early death, thus a greater mortality among the thoughtless. In all great wars, before scientific medicine had pointed out the way of preventing epidemics, many fell victims to epidemic diseases which were apt to sweep over the country. Through the study of epidemic diseases we have been able to adopt methods to protect the unfit and aid them to multiply. So it was in earlier

days that the burdens lay heavier upon those who were ignorant and careless in relation to matters of health. It was common in the slums of our large cities to find that epidemic diseases took a large toll of human life, especially at the early age, or the age of childhood. Then there were epidemic diseases constantly present, sweeping away many, if not every year, at least during certain periods. The disappearance of typhoid fever and yellow fever has been a great element in reducing the human toll. Malarial fever, which at one time was very fatal in certain sections of the country was the cause of many deaths now largely prevented by better methods of treatment. Then there were also the intestinal diseases of childhood.

It is a commonly observed fact that among the poorer classes large families predominate while among the well to do and thoughtful people families are comparatively small, but the death rate among the thoughtless and unfit kept down the population. Now with the changed conditions, in which the poor and improvident have an equal chance of surviving with those more favorably situated in life, there is being a material saving of this class which is gradually overbalancing those of better conditions and lead to serious economic problems of, what is going to happen in the future when the unfit become the larger element of population.

It is no doubt true that the medical profession is largely responsible for this increase in the unfit but notwithstanding this fact, birth control which is so much advocated is not a medical problem but a problem in which all classes are interested; it is purely an economic problem which must be considered by the general public and with the present increase of the unfit it becomes a serious national problem to determine what the future has in store for us if the unfit become a leading influence in our social life.

It is particularly true of democracies in which the people by their vote determine who their leaders shall be and what shall be the policy. Even under the most favorable circumstances the masses have but small conception of the duties of citizenship. When an unfit mass influence controls public affairs it may at last come to be a problem which will be extremely difficult to solve. The medical man may have his opinions as to the economic results of the propagation of the unfit yet it is not his problem to determine what measures shall be adopted to prevent the greater development of poorly equipped people who may predominate over the thoughtful and careful elements of society.

THE RURAL HOSPITAL AND THE COUNTRY DOCTOR

Much is being written in regard to the disappearance of the country practitioner of medicine. Various solutions have been offered to this rather difficult problem, of more or less value.

The most important difficulty seems to lie in the fact that the young medical practitioner does not feel that a country practice offers sufficient rewards considering the time and money he has expended in securing a medical education. Another important fact is that the man who receives a liberal education does not feel that a country environment is entirely to his taste and if he marries he feels that his family will not be satisfied with living in the country and being deprived of many of the social advantages that the large towns or cities offer. These are personal objections that come to the mind of the young graduate when he looks about for a location.

It has been contended that the course of medical education now in force disqualifies the young doctor for a purely country practice, that is, he is over-educated and he feels that his wide knowledge of medicine entitles him to a better field of practice than a small country village, and to overcome this difficulty it has been proposed to reduce the length of time required to secure a medical diploma. Another difficulty that has been perceived is the lack of opportunity of the country practitioner to carry on a satisfactory treatment in the absence of hospital facilities, and so it is proposed that rural hospitals be built in a properly located center in country communities which will afford the country doctor the opportunity to conduct his care and treatment of a patient on modern lines. There are many factors which induce the young medical graduate to locate in larger towns, probably the same reasons that lead other classes of people to prefer a life in the city to that of the country. This is of course the personal equation to the newly graduated doctor.

The United States Department of Agriculture has published a Farmers' Bulletin, No. 1485, advocating the rural hospital. It is undoubtedly true that easy access to a hospital would have a certain influence in deciding the young doctor's location.

The rural hospital is a serious and difficult problem. To build the proper kind of a hospital involves the expenditure of considerable money and more than all this, the maintenance of the hospital after it is constructed. Many attempts have been made to secure such hospitals either by a private donation or by county tax. In only a

few instances do we find wealthy people making gifts of sufficient amount to secure a proper equipped hospital and in only a few instances do we find counties that are willing to vote the necessary money to construct what might be called the county hospital. In only two instances in Iowa, has it been possible to secure a vote to impose the necessary taxation to build the hospital. Many private attempts have been made by individual physicians or groups of physicians to provide a hospital, but the expense of maintenance has made many of these attempts more or less failures. The difficulty has been found in the expense of keeping up these hospitals. Even where private individuals have donated the money for the construction, failures have followed because of the same difficulty of meeting the running expenses of these hospitals. In a few instances where private donations have been made, has it been possible to secure sufficient county aid to provide for the expenses.

In organizing hospitals in small country towns, the first matter of importance is to ascertain how the hospital may be maintained. It often appears that provisions are made for the construction of the building, leaving to chance or Providence or the generous disposition of the public to furnish the money. It may be said in the beginning of an argument in favor of the rural hospital that these institutions can not be made self-supporting. In order to do so it would be necessary to make hospital fees so excessive that only the well to do could afford to avail themselves of hospital treatment. Therefore, those interested in developing a rural hospital should consider where the money is coming from to meet the deficit which must necessarily arise if the fees are to be kept within the reach of patrons of the hospital. When this question is settled, then the construction of buildings may be undertaken. Not long ago a generously inclined, wealthy citizen of the town of Newton, Iowa, gave sufficient money to build a very excellent hospital but no provision was made for its maintenance and therefore those interested in the hospital secured from the county a sufficient sum of money to meet the deficit. Inasmuch as the hospital was maintained by a public taxation certain cults made a demand that they should have equal recognition with the regularly educated physicians who constituted the staff, and this association led to more or less ill feeling. There is no question but that all classes of practitioners recognized by the law have equal rights in the hospital. Much may be said in favor of the rural hospital as a means of supplying the community with satisfactory medical service, but the mistake that has thus far arisen has been the matter of the running expenses of the institution. That a hospital may be a real service to a community it is necessary that the fees to patients be moderate and this would be impossible if the earnings of the hospital are to pay its legitimate expenses.

The cry has been to organize rural hospitals but we have not yet had offered a satisfactory plan to build and maintain a hospital that will meet the real requirements of the community and render the practice of the country physician pleasant and attractive.

INSUFFICIENT EVIDENCE AS TO WHO LEFT GAUZE—RULING AS TO SURGEON FOR PART OF OPERATION

(De Rose et ux. vs. Hirst [Pa.], 127 Atl. R. 776)

The supreme court of Pennsylvania, in affirming a judgment of non-suit in this action brought by husband and wife, say that the plaintiff's regularly employed physician engaged the defendant to perform an abdominal operation on Mrs. De Rosé. The defendant did not perform the entire operation, but, after making the necessary incisions and opening the abscess which was the seat of trouble, left the operating room, with the wound open. The duty to clean it out and sew it up so far as sewing was required was on said other physician, who assisted in the operation. Called as a witness, the latter testified, without contradiction, that the gauze pads which were used were counted by the defendant before they were introduced into the plaintiff's body and that when the defendant completed his part of the operation they were removed and again counted by the defendant, and that the prior and subsequent computation agreed. He further said that following the operation it was necessary to place in the wound a piece of gauze several feet in length for drainage purposes, and that in sewing up the wound, after the defendant had left the operating room, having completed the surgery he was engaged to do, it was necessary to use pads for the purpose of sopping up blood. Some fifteen months afterward, another physician removed from the body of Mrs. De Rose a piece of gauze which was brought to her in a jar filled with alcohol, and which was subsequently thrown away. This physician said that the substance removed was a very closely packed piece of gauze, so closely packed in the incision that to pull it out took force, but he could not recall the size of it, or whether it was the kind of pack used in the performance of operations by surgeons.

Under the circumstances here manifest it could not properly or reasonably be held that the plaintiff's designation of the substance as a "pad" was sufficient on which to place the defendant's liability. She asked that, from this statement, the inference be drawn that it was one of the pads used by the defendant when he operated on her. In view of the fact that the physician who extracted the gauze

from her body, and the physician who completed the original operation (to whom she exhibited the gauze), could not identify it, and, in the light of the further facts that the latter physician in closing the incision after the defendant had departed also used pads of gauze to sop up the blood in her abdomen and properly left it in the wound after the operation for the purpose of drainage, no such compelling inference arose. The facts that a woman who was present when the substance was removed designated it as a "big long piece of packing", and another witness, who accompanied the plaintiff when she took the material in the jar to the physician to whom she exhibited it, spoke of it as a pad, were not sufficient to establish the conclusion necessary to the plaintiff's right to recover damages from the defendant.

ANNUAL MEETING OF THE UPPER DES MOINES MEDICAL SOCIETY

The annual meeting of the Upper Des Moines Medical Society will be held at the Terrace Park Casino, Milford, Iowa, Tuesday and Wednesday, August 17 and 18, 1926.

Officers—Dr. H. A. Powers, Emmetsburg, President; Dr. E. E. Munger, Spencer, Vice-President; Dr. H. L. Brereton, Emmetsburg, Secretary-Treasurer.

Visiting physicians are requested to register at Information Bureau.

The Program

Tuesday, August 17

8:30 a. m.

Call to Order by the President—Dr. H. A. Powers, Emmetsburg.

Invocation—Rev. W. D. Morrow, D.D.

1. Symptomatology of Some Common Cardiac Disorders from a Neurologic and Psychiatric Viewpoint—Dr. Tom B. Throckmorton (NP), Secretary of the Iowa State Medical Society, Des Moines.

2. Difficulty of Adjustment During the Adolescent Period—Dr. George Donohoe (NP*), Superintendent State Hospital, Cherokee.

3. Neuro-Psychiatric Hints for General Practitioners—Dr. Frank A. Ely (NP*), Des Moines.

4. Skull Fractures—Methods of Diagnosis, and Treatment—Dr. C. W. Hopkins (S*), Chief Surgeon, Chicago North Western Railway, Chicago.

1:30 p. m.

5. President's Address—Dr. H. A. Powers, Emmetsburg.

6. Treatment of Infection of the Gall-Bladder and Common Duct—Dr. James F. Weir (I*), Dr. Waltman Walters (S*), Mayo Clinic, Rochester, Minnesota.

7. The Diagnosis and Treatment of Hyperthyroidism—Dr. Charles A. Elliott (I*), Professor of Internal Medicine, Northwestern University, Chicago.

8. Subacute Bacterial Endocarditis—Dr. William D. Runyon (I*), Sioux City.

9. Osteomyelitis—Dr. M. J. Kenefick (S), President-elect, The Iowa State Medical Society, Algona.

10. The Care of Prostatic Hypertrophy, from the Physician's Viewpoint—Dr. Edwin Davis (U*), Omaha.

11. Intra-Capsular Fracture of the Hip—Dr. Carl C. Chatterton (OR*), Assistant Professor of Orthopedic Surgery, University of Minnesota and Minnesota Graduate School of Medicine.

Drive through lake region to Templar Park.

7:30 p. m.

Banquet—Templar Park, Spirit Lake

8:30 p. m.

Evening Program—Templar Park Auditorium

The Public Cordially Invited

Presiding—Dr. E. E. Munger, Vice-president, Spencer.

12. The Cancer Problem—Dr. William Jepson (S*), President, The Iowa State Board of Health, Sioux City.

13. Address—Hon. William D. Boies, U. S. Congressman, Eleventh District, Sheldon.

10:00 p. m.

Dancing—The Casino

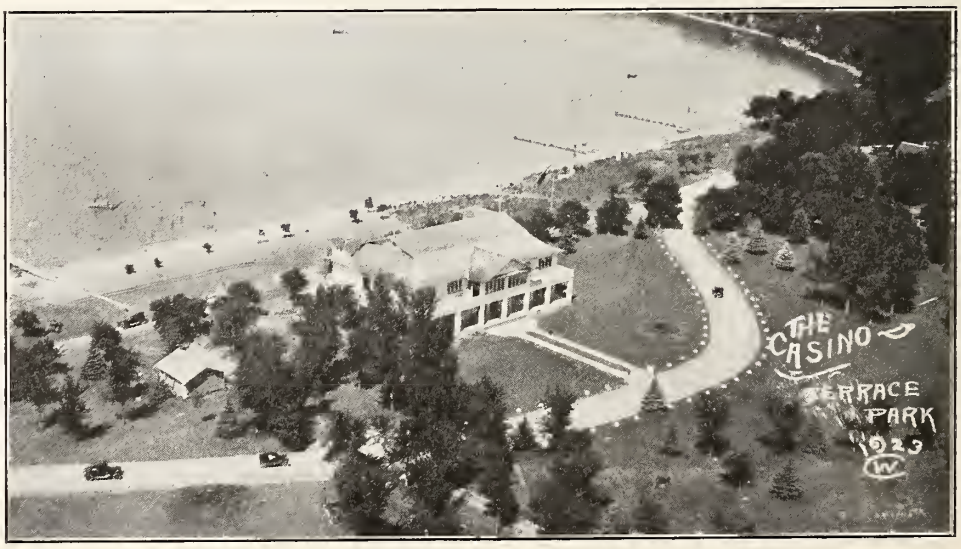
Wednesday, August 18

8:00 a. m.

14. Will the Term Eczema Be Dropped from the Nomenclature of Dermatology?—Dr. Harry C. Willett (D*), Des Moines.

15. Fractures of the Humerus—Dr. George M. Crabb (S*), Mason City.

16. Toxin and Anti-Toxin, The Prophylactic Serum for Scarlet Fever and the Treatment of Whooping Cough—with Remarks on the Theory of



Serum Treatment, Alluding to Immunity, Anaphylaxis and Allergy—Dr. H. M. McClanahan (Pd*), Professor of Pediatrics, University of Nebraska, Omaha.

17. Coronary Thrombosis—Dr. L. R. Woodward (I*), Mason City.

18. Facts and Fancies About the Mongolian Eye—Dr. Harold Gifford (Oph*), Professor of Ophthalmology, University of Nebraska, Omaha.

19. Fractures—Dr. B. F. Lounsbury (S*), Associate Professor Surgery, University of Illinois, Chief Surgeon C. M. & St. P. Railway, Chicago.

1:30 p. m.

20. The Diagnosis of Cardiospasm and Cancer of the Esophagus—Dr. W. W. Bowen (S), Ft. Dodge.

21. Recent Progress in Nephritis—Dr. Wilber E. Post (I*), Clinical Professor of Medicine, Rush Medical College, University of Chicago.

22. Injuries and Ulcers of Cornea—Dr. William R. Murray (OALR*), Professor of Ophthalmology, Oto-Laryngology, University of Minnesota, Minneapolis.

23. Treatment of Diabetic Coma—V. E. Levine, A. M. Ph.D. (Metabolism), Professor of Biochemistry, Creighton University, Omaha.

24. The Arthritic Knee—Dr. Arthur Steindler (Or*), Professor of Orthopedics, University of Iowa.

7:30 p. m.

Evening Program—The Casino

The Public Cordially Invited

Presiding—Dr. E. E. Munger, Vice-President, Spencer.

25. The Public Health—Dr. Don M. Griswold (PH*), Head of the Department of Public Health, University of Iowa.

26. Address—The Relationship Between the Medical Profession and the Juvenile Court—Hon. B. F. Butler, Judge, Twenty-first Judicial District, Sibley.

Entertainment—Dancing

The Sioux Valley Medical Association has accepted an invitation to attend this meeting, and will hold their business meeting at the close of the afternoon session on August 18. Its officers are: President, Dr. J. P. Isaac, Freeman, South Dakota; Secretary, Dr. R. F. Bellaire, Sioux City, Iowa; Treasurer, Dr. W. R. Brock, Sheldon, Iowa.

It will be greatly appreciated if physicians desiring tickets to the banquet at Templar Park, for themselves and ladies, will promptly notify Dr. H. O. Green, Spencer, Iowa, the number desired. Payment of $1.25 per plate may be sent to Doctor Green with notice or to Templar Park Management on or before August 17.

AMERICAN BOARD OF OTOLARYNGOLOGY

The next examination given by the American Board of Otolaryngology will be held in Denver, Colorado, at the University Hospital on Monday, September 13, 1926. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

SOCIETY PROCEEDINGS

Harrison County Medical Society

The Harrison County Medical Society held a picnic meeting, June 2nd, at "Jenny Wren's Nest", a beautiful estate between Magnolia and Pisgah which has been prepared as a tourists' park.

Dr. De Vore of Missouri Valley read a paper on Neurasthenia. After the dinner Dr. E. C. Junger of Soldier, candidate for representative, discussed Agricultural Problems.

Those present were: Drs. Clark, Cole and Anderson of Woodbine; Hanson, Magnolia; Kennedy, Logan, De Vore, Missouri Valley; Cook, Pisgah; Junger, Soldier, and McDade of Moorhead.

Marion County Medical Society

The Marion County Medical Society was held Thursday, June 24, 1926 at 2:00 p. m., in the American Legion Hall at Pella, Iowa.

Program

Address—James Wallace, M.D., of Iowa State Department of Health, Des Moines.

Case Report—J. R. Wright, M.D., Knoxville.

Case Report—Carl F. Aschenbrenner, M.D., Pella.

Delegate's Report—E. C. McClure, M.D., Bussey.

The Summer Clinic of the Marshall County Medical Society

The summer clinic of the Marshall County Medical Society was held at the Odeon Theatre, Marshalltown, Iowa, Thursday, June 24, 1926.

Program

Skin Clinic, by Dr. Richard L. Sutton, prof. dermatology, University of Kansas School of Medicine, Kansas City, Missouri.

Recognition and Treatment of Acute Eye Conditions, by Dr. James M. Patton, prof. ophthalmology, University of Nebraska College of Medicine, Omaha, Nebraska.

Diagnosis and Treatment of Hypertrophic Pyloric Stenosis, by Dr. Lawrence E. Kelley, Des Moines, Iowa.

Medical and Health Education of the Public and Periodic Health Examinations, by Dr. John M. Dodson, executive secretary of the Bureau of Public Health and Public Instruction of the American Medical Association.

Officers—President, Dr. J. L. Wilkenson, Laurel; vice-president, Dr. Earl H. Noble, Clemons; secretary-treasurer, Dr. W. W. Southwick, Marshalltown.

Polk County Medical Society

The Polk County Medical Society met for its regular monthly meeting in the Oak Room of the Fort Des Moines Hotel, on June 29, 1926. The meeting was called to order by the president, Dr. Thomas A. Burcham.

The minutes of the previous meeting were read and approved.

Program

Cholecystography—H. H. Dilley, M.D.

Clinical cases: Influenzal Meningitis—M. L. Turner, M.D.; Cervical Fracture—D. M. Blum, M.D.; Metastatic Carcinoma of Abdomen—F. W. Fordyce, M.D.; Life History of Rheumatic Heart Disease—M. M. Myers, M.D.

Dr. Dilley's paper was discussed by Dr. E. E. Morton, Dr. W. E. Baker and Dr. Thomas A. Burcham.

Dr. Thomas A. Burcham, as chairman of the committee appointed to confer with the Board of Trustees of the Iowa State Medical Society, concerning the status of members coming by transfer from a component society of another state, read a letter from the trustees of the State Society giving the following opinion. "Viz.—that a doctor does not become a member of the Iowa State Medical Society until his annual assessment has been received by the secretary of the Iowa State Society."

Chapter One, Section Five, of the Constitution and By-laws of the Iowa State Medical Society reads as follows: "For the purpose of the medical defense a member shall be regarded as in good standing only when his dues have been received by the secretary of the State Society."

Resolutions for the amending of Section 3, Chapter 1 of the By-laws was read by Dr. L. K. Meredith, who moved its adoption. Seconded by Dr. M. L. Turner and unanimously carried.

Resolutions on the death of Dr. Wilbur Conkling was read by Dr. S. E. Lincoln, who moved its adoption. Duly seconded and unanimously carried.

Forty-four members were present.

Meeting adjourned.

L. K. Meredith, Sec'y-Treas.

Resolutions
Wilbur S. Conkling, G.Ph., M.D.
1873—1926

Adopted—June 29, 1926

Whereas: Our beloved fellow-member, Dr. Wilbur S. Conkling has passed from out of our earthly companionship; and,

Whereas: We prize the example of his supreme devotion to service, as exemplified in his thirty years of highest endeavor in military medicine, in his fine spirit of faithful friendship, and the noblest interpretation of the ethical standards of the medical profession, therefore be it

Resolved: That, we the members of the Polk County Medical Society record this tribute of recognition and high regard for Doctor Conkling and his work among us, and be it further

Resolved: That a copy of these resolutions be submitted to the bereaved family, the daily press, and the Journal of the Iowa State Medical Society.

S. E. Lincoln,
D. J. Glomset,
Walter L. Bierring,
Committee.

Scott County and Rock Island County Medical Societies

At a joint session of the Scott County and Rock Island County Medical Societies, held April 6, Scott county physicians adopted a resolution to close their offices Wednesday afternoons beginning May 1. The papers of the evening were by Dr. Arthur Steindler of Iowa City on Comprehensive Paraplegia Due to Spinal Disease, and by Dr. S. G. Hands of Davenport on Tuberculosis of the Larynx.

Story County Medical Society

According to the Ames Tribune of April 2, the Story County Medical Society met at the Sheldon-Munn Hotel, about twenty-five members were present. It seems that the question of the care of indigent patients was taken up and a committee appointed.

The following officers were elected: President, Dr. Peter Joor, Maxwell; vice-president, Dr. James F. Edwards, Ames; secretary-treasurer; Dr. B. G. Dyer, Ames; delegate State Medical Association, Dr. Connor, Nevada.

Twin Lakes District Medical Society

The fourth annual assembly of the Twin Lakes District Medical Society was held Thursday, June 24, 1926, at Rockwell City, Iowa.

Program

Call to Order—President Ben C. Hamilton, Jr., Jefferson.

The Surgical Anatomy of the Female Perineum (Lantern Slides)—Dr. H. J. Prentiss, professor and head of the department of anatomy, histology, embryology and neuroanatomy, college of medicine, University of Iowa.

Diagnostic Difficulties in the Upper Abdomen—Dr. Charles J. Rowan, professor and head of the department of surgery, college of medicine, University of Iowa.

Intermission for Picnic Luncheon

One Case Each: Cardiac, Renal and Vascular Disease—Dr. Fred M. Smith, professor and head of the department of medicine, college of medicine, University of Iowa.

Present Status of Scarlet Fever Control—Dr. Don M. Griswold, commissioner state board of health, Des Moines.

Water Sanitation—John J. Hinman, associate professor of sanitation, college of medicine, University of Iowa.

Estimation of Physical Fitness—Dr. John T. McClintock, professor and head of the department of physiology, college of medicine, University of Iowa.

Some Interesting Kidney Cases (Illustrated)—Dr. Nathaniel G. Alcock, professor of genitourinary surgery, college of medicine, University of Iowa.

Business Session.

Miss Frances van Zandt, medical librarian, Des Moines, was present and exhibited the material available to the medical profession of Iowa.

Des Moines Valley Medical Association

The fifty-third annual meeting of the Des Moines Valley Medical Association met at Ottumwa, Wednesday and Thursday, June 16 and 17.

Morning Session, June 16

8:30—Motion Picture Films.

1. Gastric Motor Phenomena.
2. Gastric Ulcers.

Produced under the direction of Lewis Gregory Cole, M.D., New York City.

9:30—Medical Clinic, conducted by Frank Smithies, M.D., professor of medicine, University of Illinois College of Medicine, Chicago. Assisted by E. T. Edgerly, M.D., Ottumwa.

10:30—Surgical Clinic, conducted by Arthur E. Hertzler, M.D., Kansas City, Missouri, professor of surgery, University of Kansas School of Medicine. Assisted by H. W. Vinson, M.D., Ottumwa.

11:30—Urological Clinic, conducted by J. Edward Burns, M.D., Kansas City, Missouri. Assisted by F. L. Nelson, M.D., Ottumwa.

Afternoon Session, June 16
1:30 p. m.

1. Paper—The Role of Anomalies of the Capillary Blood Supply of the Stomach and the Duodenum in the Production and Maintenance of Peptic Ulcer, with a Discussion of Their Significance with Respect to Treatment—Frank Smithies, M.D.
2. Paper—Chronic Pain of the Lower Abdomen—Arthur E. Hertzler, M.D.
3. Paper—The Various Complications Arising Before or After Prostatectomy—J. Edward Burns, M.D.

Evening Session, June 16

6:30—Banquet at Ottumwa Country Club.

Morning Session, June 17

9:00—Clinic, conducted by Philip H. Kreuscher, M.D., clinical professor orthopedic surgery, Loyola University School of Medicine, Chicago, Illinois. Assisted by E. B. Howell, M.D., Ottumwa.

10:30—Medical Clinic, conducted by Don C. Sutton, M.D., of Chicago, assistant professor of medicine, Northwestern Medical School, and on Cook County Attending Staff, assisted by E. R. Walker, M.D., Ottumwa.

Afternoon Session, June 17

1. Paper—Backache—Philip H. Kreuscher, M.D.
2. Paper—Some Bone Lesions of Obscure Etiology—Oliver J. Fay, M.D.
3. Paper—X-Ray Interpretation of Bone Lesions of Known Etiology—Thomas A. Burcham, M.D.
4. Paper—Disease of the Heart—Don C. Sutton, M.D.

Officers—President, Dr. A. P. Johnson, Sigourney; first vice-president, Dr. C. S. Reed, Agency; second vice-president, Dr. W. C. Newell, Ottumwa; secretary-treasurer, Dr. S. A. Spilman, Ottumwa.

COMING MEETINGS

Medical Society of the Missouri Valley

The thirty-ninth annual meeting of the association will be held jointly in Council Bluffs, Iowa, and Omaha, Nebraska, Wednesday, Thursday and Friday, September 15, 16 and 17, 1926, under the presidency of Dr. A. D. Dunn of Omaha, headquarters and meeting place will be the Fontenelle Hotel, where the papers and addresses will be given. A full day's clinic will be held at the Clinic building, Council Bluffs.

Dr. Dunn has appointed the following committees: Program—John E. Summers, Omaha, chairman; Donald Macrea, Council Bluffs, vice-chairman; William Wherry, Omaha, Nebraska; P. T. Bohan, Kansas City, Missouri; E. H. Skinner, Kansas City, Missouri; T. G. Orr, Kansas City, Missouri; J. M. Mayhew, Lincoln, Nebraska; Granville N. Ryan, Des Moines, Iowa; Charles W. Green, Columbia, Missouri; Fred Smith, Iowa City, and John M. Bell, St. Joseph, Missouri. Arrangement—Earl Sage, Omaha, Nebraska and M. E. O'Keefe, Council Bluffs.

Dr. Dunn called a special committee meeting at the Adolphus Hotel, Dallas, Texas, during the session of the American Medical Association.

Western Surgical Association

The Western Surgical Association will meet at Duluth, Minnesota, Thursday, Friday and Saturday, October 14, 15 and 16, 1926; headquarters at Hotel New Duluth.

Sessions will be held as follows:

Thursday, October 14—9:00 a. m.-12:30 p. m.; 2:00 p. m.-5:00 p. m.; annual dinner, 7:00 p. m.

Friday, October 15—8:30 a. m.-12:30 p. m.; business session 1:30 p. m.; 2:00 p. m.-5:00 p. m.

Saturday, October 16—Social features.

Surgical Association of the Rock Island Lines

The twenty-fifth annual meeting of the Surgical Association of the Rock Island Lines will be held at the Nicollet Hotel, Minneapolis, Minnesota, Tuesday and Wednesday, October 12 and 13, 1926. This meeting of the surgeons of the Rock Island Railway Company immediately precedes the meeting of the Western Surgical Association at Duluth which will be held October 14, 15 and 16.

HOSPITAL NEWS

Governor Smith of New York signed an account May 6th, appropriating $12,500,000 for the improvement of state hospitals; this money will be taken from the $50,000,000 hospital bonds issue; a similar sum was appropriated last year.

The new University Hospital at Iowa City will cost over $2,000,000 and will be one of the largest institutions on any university campus in the country.

The Maternity Hospital of Sioux City which has been in operation twelve years has closed.

Improvements costing approximately $115,000 have recently been made on the Methodist Hospital, Des Moines.

Gift to Hospital

Mrs. E. E. Young, who recently died at her home in Clinton, in her will gives $275,000 to Jane Lamb Memorial Hospital to which she had previously given in excess of $250,000 during her lifetime, making a total gift to the hospital of $525,000.

PERSONAL MENTION

Dr. Harry Lamb of Davenport, who has been on the staff of the University Hospital of Iowa City has recently become associated with Dr. Karl Vollmer. Dr. Vollmer specializes in diseases of the eye, nose and throat. Dr. Lamb has for the past two years been an assistant of Dr. L. W. Dean in the University Clinic.

Dr. Morris Levine has been promoted to associate professor of otology at the New York Post-Graduate Medical School and Hospital.

Dr. George Mogridge, superintendent of the institution for the feeble-minded, at Glenwood, attended the convention at Toronto, Canada, of the American Association for the Feeble-minded. In addition Dr. Mogridge will attend the session of the American Psychiatric Association in New York City.

Dr. William Jepson of Sioux City has been appointed a member of the Iowa State Board of Medical Examiners by Governor John Hammill. The appointment takes effect July 1. Dr. Jepson will serve for three years.

Dr. A. E. McMahon of El Paso, Texas, has become a member of the Hampton Clinic, to take the place of Dr. H. H. Johnson. Dr. McMahon is a graduate of the medical department of the Iowa State University.

Dr. G. M. Young of Center Junction is removing to Cedar Rapids where he will engage in the practice of medicine. Dr. Young is a graduate of the State University College of Medicine.

Dr. J. C. Hancock delivered the graduating address before the graduating class of the Nurses' Training School of Finley Hospital, Dubuque.

Dr. C. A. Waterbury has been elected president of the staff of St. Francis Hospital, Waterloo.

MARRIAGES

Dr. C. E. Broderick of Cherokee and Miss Ona Kating of Newton were married June 5th by Rev. McAuliffe at the Immaculate Conception Parsonage. Dr. Broderick is a graduate of the Iowa State University and specialized in diseases of the eye, ear, nose and throat. Mrs. Broderick graduated from Cornell.

Dr. E. J. Dittmer of Manchester and Miss Hanna Rosell of Sioux Rapids were married June 7th at Sioux Rapids. Dr. Dittmer is a graduate of the University of Iowa and the bride is a graduate from the Luther's Hospital, St. Paul, Minnesota.

Dr. Frank Piekenbrock of Dubuque and Miss Helen Marie Bergner, also of Dubuque, were married June 1st at St. Anthony's Church.

OBITUARY

Dr. C. D. Horton of Calmar, died at his home January 24, 1926. Dr. Horton was born at Granger, Minnesota, May 5, 1865. After teaching for a number of years, he entered the Iowa University Medical School, from which he graduated March, 1894. He first located in Ft. Atkinson and later moved to Calmar, where he practiced fifteen years. On December 24, 1889, he married Grace Gallup of Cresco, who survives him.

Dr. Ulysses A. Rich died at Methodist Hospital, Des Moines, April 10, 1926. He was born in Bethel, Ohio, in 1843; moved to Pella in 1867 and to Des Moines in 1888. Practiced medicine in Iowa fifty years.

Dr. Albert C. Zaiser, formerly of Burlington, died at his home in Santa Ana, California, April 4, 1926. Dr. Zaiser was born in Burlington May 18, 1873. He attended the medical department of the Iowa State University for two years; the Creighton Medical College, Omaha, for one year and the St. Louis College of Physicians, from which he graduated March 17, 1897. After graduating, he returned to Burlington where he engaged in general practice until he moved to California.

Dr. Q. L. Patter died suddenly at his residence in Ackley, April 4, 1926 of influenza. Dr. Patter was born in Cleveland, Ohio, April 29, 1842. He came with his parents, to Mount Pleasant, Iowa, when he was eight years old. Dr. Patter graduated in medicine from the Iowa State University and from the University of Michigan; came to Ackley in 1870. About twenty years ago he retired from active practice.

Dr. E. H. Wilson died at St. Andrew, Florida, May 26, 1926, at the age of ninety-two years, three months, thirteen days. Dr. Edward Henry Wilson was born February 13, 1834, at North Wrentham, Massachusetts, graduated from the Hahnemann Medical College, Chicago, 1871, and settled in Osceola, Iowa, where he practiced for more than twenty years.

Dr. J. W. Harrison of Guthrie Center died Sunday, June 6th, as a result of blood poisoning. Dr. Harrison had practiced in Guthrie Center for about thirty years.

Dr. C. I. Pease, formerly of Linn Grove, Iowa, died at his home in Calumet, Oklahoma. Dr. Pease graduated from Rush Medical College in 1889.

We are noting the death of a distinguished surgeon whose work is well known to the medical profession and his life work might be well brought to the attention of our own profession.

Dr. Edward H. Bradford was born in 1848, he obtained his A.B. degree at Harvard University in 1869 and his medical degree in 1873, after a year's internship at the Massachusetts General Hospital. Following his internship he studied two years in Vienna, Berlin, Strasburg and other European medical centers. He began practice in Boston but soon saw the possibilities of orthopedic surgery and studied under Dr. Taylor of New York. Dr. Bradford succeeded Dr. Buckmister Brown, then the leader of orthopedic surgery in New England, at the House of the Good Samaritan. In 1880 he was appointed surgeon to out-patients in the City Hospital, later becoming full surgeon and resigning only when work at the Children's Hospital, teaching and private practice, absorbed all his energy and time. In 1881 he became assistant surgeon in the Harvard Medical School, later he became the first surgeon of orthopedic surgery, filling the chair endowed by bequest of Dr. Buckmister Brown. In 1890 he and Dr. Lovett published their Treatise on Orthopedic Surgery which went through five editions. He was dean of the faculty of medicine from 1912 to 1918 and during the late war assumed the arduous task of service on the Board of Draft Appeal for Selective Service. From 1919 to 1925 he was overseer of Harvard. Dr. Bradford may be said to have been the pioneer of orthopedic surgery.

Samuel Jason Mixter, one of the noted Boston surgeons, died at Grand Junction, Tennessee, January 19, 1926.

He was educated at Amherst College and the Massachusetts Institute of Technology. After graduation he entered upon the study of medicine. He graduated from the Harvard Medical School in 1879. When he was a student in the Institute of Technology he specialized in physics.

On August 12, 1879 he married Wilhelmina Galloupe. He then spent a year in Vienna where he gave special attention to anatomical studies and the developing of microscopic pathology, which work was continued on his return to Boston.

In 1882 he became assistant demonstrator and in 1887 demonstrator of anatomy at the Harvard Medical School. In 1880 he was appointed to the surgical service of the Carney Hospital and in 1886 to the out-patient department of the Massachusetts General Hospital. Later he became surgeon to the Carney Hospital, which position he resigned in 1897. In 1893 he was appointed visiting surgeon to the Massachusetts General Hospital and chief of the West Surgical Service in 1911, resigning at the age of sixty-four in 1919.

Dr. Mixter gave special attention to the technique of surgery and introduced many useful devices.

In 1917 he was elected president of the American Surgical Association and was made first president of the New England Surgical Society.

Dr. Samuel Jason Mixter was born in Hardwick, Massachusetts, on the 10th of May, 1855.

When Dr. Mixter retired from active practice he returned to his Hardwick home and gave his attention to his magnificent herd of Guernsey cattle and to outdoor sports he so much loved.

BOOK REVIEWS

THORACIC SURGERY

The Surgical Treatment of Thoracic Disease. By Howard Lilienthal, M.D., Professor of Clinical Surgery at Cornell University Medical School. Two Octavo Volumes Totaling 1294 Pages, With 90 Illustrations, 10 in Colors. W. B. Saunders Company, 1925. Cloth $20.00.

The first impression that comes to us in examining the work is the fine make-up of the volumes, the literary character of the text and the attractive mechanical work. We are, also, impressed by the title of the work and the ambitious undertaking by one of our most resourceful surgeons with long years of successful practice.

Following a somewhat extended chapter on General Considerations comes a chapter on Physiology of the Thorax by Dr. Evarts A. Graham of Washington University, St. Louis, who is peculiarly fitted for this work. Following the chapter on Physiology is a chapter on Roentgenology by Dr. Leopold Jacobs. Dr. William Branower presents a chapter on Anesthesia and Dr. Ruben Ottenberg a chapter on Blood Transfusion. The chapter on Intravascular Treatment of Thoracic Aneurism with Gold Wire and Galvanism is by Dr. William C. Lusk. Pulmonary Tuberculosis, Its Treatment by Induced Pneumothorax, by Drs. J. Burns Amberson, Jr. and Andrew Peters, of the Loomis Sanitorium.

The remainder of the work is by Dr. Lilienthal, himself. These discussions serve as the foundation to the main subject, Thoracic Surgery, which may be regarded as one of the most difficult and most complex branches of surgical practice. Another foundation chapter is by Dr. Lilienthal on the Anatomical Outline of the Thorax.

The first chapter on the surgical side is The Mediastinum, a field but recently cultivated but of much importance. An interesting subject is presented in Traumatic Asphyxia from Crushing Injury, and Mediastinal Emphysema. The importance of this chapter grows constantly, The Esophagus, Heart, The Great Vessels, Chest Wells, The Diaphragm, Acute and Subacute Empyema are found in the first volume.

In the second volume we find Chronic Empyema, Lungs, Tuberculosis. A chapter is devoted to Cer-

vical Sympathectomy and Its Application to Certain Thoracic Diseases, especially in its relation to Angina Pectoris. Considerable discussion has been excited since this operation was suggested. Many heart men of great eminence have opposed this measure as dangerous in obscuring an important danger signal. Dr. Lilienthal is moderate in his claims, he says "Cervical sympathectomy is certainly worth a trial in aortalgia or in pain of thoracic aneurysm, always preceded, of course, by antiluetic treatment". The method of the operation is pointed out in much detail and well illustrated.

A chapter is devoted to Operations Upon the Phrenic Nerve; Their Application in Thoracic Disease.

A chapter is given on Military Surgery, as we know much material was afforded by the World War.

From the contents of these volumes it will be seen that the work will be of great value to surgeons of large practice, particularly in this field.

MODERN MEDICINE—ITS THEORY AND PRACTICE

In Original Contributions by American and Foreign Authors. Edited by Sir William Osler, Bart., M.D., F.R.S.; Third Edition, Thoroughly Revised. Re-edited by Thomas McCrae, M.D., Assisted by Elmer H. Funk, M.D. Volume II—Diseases of Doubtful Etiology—Diseases Caused by Protozoa, Spirochetes and Animal Parasites—Diseases Due to Physical, Chemical and Organic Agents—Deficiency Diseases. Illustrated. Lea and Febiger. Price $9, 1925.

The second volume of Modern Medicine by Sir William Osler is divided into seven parts.

Part I is devoted to diseases of doubtful or unknown etiology including fevers of infectious origin. Under this first division will be found well known diseases like measles, small-pox, and typhoid fever, prepared by well known writers including Dr. George Dock, Dr. Thomas McCrae and others equally well known.

In Part II may be found amoebic dysentery by Dr. Richard P. Strong, malaria fevers by Dr. Charles F. Craig and trypanosomiasis by Surgeon-General Sir David Bruce and also other forms of protozoan infections.

Under Part III may be found as the leading disease, syphilis, by the late Sir William Osler, revised by Dr. Lewis A. Conner. Yellow fever is also included in this part. All the papers are prepared by men well known in special lines of practice.

Under head of Part IV will be found diseases caused by animal parasites. The chief discussion continued by Dr. Stiles.

Part V—Disease due to physical agents as heat stroke, increased atmospheric pressure, etc.

Part VI—Diseases due to chemical poisons, including alcohol, opium, codeine, heroin, morphine, cocaine. This section of the work is prepared by Dr. Alexander Lambert, who has written rather extensively on this subject.

Under Part VII are a number of diseases grouped as deficiency diseases, such as pellagra, beriberi, rickets, etc. The latter forms of disease have received considerable attention of late years since we have come to know more of foods and their preparations.

THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY IN THE WORLD WAR

Volume XV; Statistics Part Two; Medical and Casualty Statistics Based on the Medical Records of the United States Army, April 1, 1917 to December 31, 1919, Inclusive. Prepared Under the Direction of Major General M. W. Ireland; by Major Albert G. Love, M.C., U. S. Army. Government Printing Office, Washington, D. C., 1925.

In this volume of 1368 pages may be found every form of statistics from a total 3,600,000 men in the camps, the number of men at each camp, including white and negro. Casualty statistics, the nature of wound, injury or disease.

Volume XV, part one, contains statistics of the first million draft recruits, Physical Examinations, second, Defects Found, third, Army Anthropology. Later will be found final casualty statistics. It is stated that approximately 12,000,000 individual medical records were received in the Surgeon General's Office, all of which have been utilized for the statistics which appear in this volume. This will give an idea of the extent of the statistics, but does not include the statistics published in Volume XV, part one, Physical Examinations of the first million.

Only five volumes of the History of the World War have been published.

Volume XV, part one, was the first volume published, then Volume I, next Volume V, next Volume XI, and this Volume XV, part two.

APPLIED BIOCHEMISTRY

By Withrow Morse, Ph.D., Professor of Physiological Chemistry and Toxicology, Jefferson Medical College, Philadelphia; Octavo of 958 Pages With 257 Illustrations. W. B. Saunders Company, 1925. Cloth $7.00 Net.

This is clearly a book on the science of medicine. It is a presentation on the relations of chemistry to the tissues of the body, the evolution of man and his environment. There are many mysteries which surround the evolution of life from the lower to the higher forms, but these mysteries are being cleared, as new light is being thrown upon them by chemistry. Chemistry and biology joined under the term of chemical biology or biochemistry and under the direction and influence of penetrating minds leads highly trained physicians to conceptions quite outside and beyond the daily routine of practice. This

book will find a place with men of this kind who will exercise the guiding influence in the medical world, whether in real practice or as guides in research institutions or hospitals. It is certainly an interesting and scientific book.

THE PRINCIPLE AND PRACTICE OF ENDOCRINE MEDICINE

By William Nathaniel Berkeley, Ph.D., M.D., Recently Attending Physician at the Good Samaritan Dispensary, New York; and One Time Director of the Laboratory of Experimental Medicine, Cornell University Medical College. Illustrated With 56 Engravings and 4 Colored Plates. Lea and Febiger, 1926. Price $4.50.

The study of the endocrine glands has become so much of medicine that nearly every work on medicine and surgery contains a chapter on the subject. We have now a single volume of 368 pages devoted entirely to the principles and practice of endocrine medicine.

The author in the preface states that in this book a sincere effort has been made to simplify the principles involved, he further states that the book is intended for doctors in active practice from the standpoint of the clinical practitioner. An examination of the book seems to show that the claims of the author are correct and that the general practitioner will find in this book a desirable addition to his library.

THE MEDICAL CLINICS OF NORTH AMERICA

Volume 9; Number 3; New York Number. Octavo of 312 Pages With 72 Illustrations. W. B. Saunders Co., 1925. Price Per Clinic Year, Paper $12.00, Cloth $16.00.

After reviewing Morse on Biochemistry, dealing with the difficult and profound questions relating to chemistry and biology we come to the interpretations of these abstract questions, by clinicians who understand the questions involved.

Dr. Herman O. Misenthal presents The Interpretation of Sugar Tolerance Tests, The Common Occurrence of Renal Glycosuria. Then comes a discussion of Digitalis; Hypersusceptibility and Digitalis Dosage, by Dr. Walter A. Bastedo of St. Luke's Hospital, another biochemical interpretation of much practical value. Dr. Howard F. Shattuck presents the Clinical Use of Liver Function Tests; The Icterus Index and Rowntree-Rosenthal Serum Dye Test, in which we are informed that "There is now considerable evidence that the icterus index is the most useful liver functional test that we have for routine clinical work".

An especially interesting contribution by Dr. A. S. Blumgarten is, Hyperthyroidism and Dominant Cardiovascular Symptoms Without Goiter.

The remaining clinics are of equal value but space does not permit us to refer to them.

THE ULTRA-VIOLET RAYS IN THE TREATMENT AND CURE OF DISEASE

By Percy Hall, M.R.C.S. (Eng.), L.R.C.P. (Lond.) With Introductions by Sir Henry Gauvain, M.A., M.D., M.C. (Camb.) Medical Superintendent, Lord Mayor Treloar Cripples' Hospitals, and Leonard E. Hill, M.B. (Lond.) F.R.S., Director, Department of Applied Physiology and Hygiene, National Institute of Medical Research, London. C. V. Mosby Co., St. Louis, 1924. Price $3.75.

Very little of an authoritative character has been written on ultra-violet rays in the treatment of disease. Most that we have seen is found contained in selling manuscripts furnished by ultra-violet companies. This is a volume of 110 pages with numerous illustrations for the purpose of bringing out what is known of value in connection with ultra-violet rays.

THE PHARMACOPEIA OF THE UNITED STATES OF AMERICA

Tenth Decennial Revision (U. S. P. X.). By Authority of the United States Pharmacopeial Convention, Held at Washington, D. C., May 11, 1920. Prepared by the Committee of Revision and Published by the Board of Trustees. Official From January 1, 1926. J. P. Lippincott Company, Pennsylvania.

It is well known that the first general convention for the standardization of drugs in America was held in 1820, and since then a new edition has been issued every ten years, eliminating certain remedies that have been found without value, and adding some new ones that have stood the test of time. At the present time every pharamacopeial house takes a free hand in preparing and placing on the market under various attractive names remedies that they think will attract the attention of the medical profession. Of course very few medical men take the trouble to look up the remedy in the pharamacopoeia, and prescribe the article whether it is official or not, but notwithstanding this growing tendency it has been thought best to establish a standardized list of drugs that have met all the tests of chemistry and therapeutics.

The Journal of the American Medical Association has established a council on chemistry and pharmacy to afford the medical profession as much protection as possible against new remedies with fraudulent claims. Druggists have been more careful in supplying remedies than the doctors themselves and it is a strange fact the drugs purchased by reputable stores are better and more reliable than the supplies generally purchased by the physician. Unfortunately the physician purchases his supplies at the cheapest supply house without much regard to the standardized remedies found listed in the U. S. Pharamacopeia. It is much to the credit of the commission that they continue the publication of standardized remedies in medicine.

A STANDARD FOR PITUITARY EXTRACT

One of the pleasing features of the Tenth Revision of the U. S. Pharmacopoeia is the inclusion therein of a definite standard of activity for pituitary extract. Inasmuch as pituitary extract is best known as an oxytocic, it is the effect of the extract upon the uterus of a virgin guinea-pig that constitutes the official test. Some manufacturers, however, among them Parke, Davis & Co., apply the pressor or blood-pressure-raising test as well, since pituitrin (pituitary extract, P. D. & Co.) is administered for its effect upon the arterial system in hemorrhage and other conditions, and for its regulating effect upon both the intestinal musculature and the musculature of the bladder.

It is impossible for the physician to judge of the activity of a pituitary preparation by physical examination of it. Manufacturing methods have made it possible to produce pituitary extracts not only far below the standard, but far above it; hence the urgent necessity of the pharmacopoeial requirement in the interest of definite dosage.

In this case, however, as in many others, the physician is dependent upon the manufacturer not only because he himself has none but clinical means of testing the activity of the product, but because the products of different houses vary, and possibly also the product of the same house at different times. A manufacturing concern of recognized scientific standing is really the only guaranty of quality that the physician has.

PROPAGANDA FOR REFORM

Treatment of Snake-Bite—The indications for the treatment of snake-bite are the same as those for any other kind of poisoning: namely, first to remove the poison, secondly, to remove its effects. Immediate interruption of absorption should be attempted by application of a bandage for a period. Removal of the poison from the wound after having enlarged it, by sucking, by washing, or by destruction by red heat or a caustic is the next thing to attempt. The third, most important remedy, is the injection of antivenom serum, which must be specific for the particular venom involved. (Jour. A. M. A. July 4, 1925, p. 57.)

The Parathyroid Hormone—The significance of a hormone elaborated by the parathyroid structures for the metabolism of calcium, at least so far as the relation of the content of this element in the blood is concerned, seems to be well established. The promise of preparing an effective parathyroid product seems about to be fulfilled in various places. The publications of Hanson in 1923 show that he was actively engaged in the extraction of an active product. Since then success had attended the investigation of Fisher and Larson and particularly those of Collip. Both Collip and Fisher and Hanson warn against the possible dangers of unwarranted therapy with potent preparation, for symptoms of atonia depression, diarrhea and dyspnea are readily produced by large doses of a potent preparation. (Jour. A. M. A., July 11, 1925, p. 118.)

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EPIDEMIC ENCEPHALITIS: RESIDUA, LATE MANIFESTATIONS AND ATYPICAL FORMS OF THE DISEASE*

George E. Price, M.D., Spokane, Washington

Recovery, or apparent recovery from an acute attack of epidemic encephalitis does not guarantee that the patient will have no further trouble from the infection. Relapses are common and may occur weeks, months or even years after the acute symptoms of the initial attack have disappeared. Symptoms referable to the nervous system may persist as residua from the acute attack or may appear at varying intervals after apparent complete recovery.

Whether these late manifestations of encephalitis are true sequelæ, should be considered as post-encephalitic states or regarded as manifestations of a chronic form of the infection I do not believe we can definitely say in the light of our present knowledge of the etiology and pathology of the disease. We do know, however, that chronic cases exist, running a comparatively mild course over a long period of time, with occasional lighting up of the infection as shown by exacerbations of existing symptoms or the transient appearance of new phenomena. Moreover, in the so-called parkinsonian sequel, recent acute inflammatory lesions have been found in association with the chronic degenerative changes, at autopsy. A patient seen within the past month was having a relapse after seven years, with no subjective residual symptoms from the initial attack except occasional spells of vertigo. It would seem, therefore, that the preponderance of evidence is in favor of a persisting chronic infection.

As patients are apt to consult first the general practitioner about their symptoms I thought it might be of interest to describe some of the late effects of encephalitis, as they frequently present difficulty in diagnosis, especially where the initial symptoms have been slight or the history of the acute attack vague and indefinite.

Motor symptoms, in my experience, constitute the most frequent sequelæ of epidemic encephalitis, the parkinsonian syndrome being the most common. G. Levy, from the clinic of Pierre Marie, in Paris, reported in 1922, 129 cases of encephalitis with sequelæ, of which seventy presented the parkinsonian syndrome, and forty-three excito-motor syndromes, chiefly choreic and myoclonic. In the past few years, in the northwest, there has certainly been a preponderance of parkinsonism over all other sequelæ that have come under my observation. This unfortunate and disabling condition may be continuous from the acute illness but more often appears after an interval of months or years of apparently restored health.

Post-encephalitic parkinsonism presents certain clinical and histological differences from the ordinary senile paralysis agitans. These were well described by A. J. Hall, in a lecture before the Royal College of Physicians of London. The characteristic mask-like face is an early manifestation in parkinsonism, and frequently rapid or even abrupt in appearance, while in paralysis agitans this symptom is, as a rule, gradual in development and somewhat late in time of appearance. The fine, pill-rolling tremor of paralysis agitans is commonly lacking in parkinsonism, which presents a coarser, more irregular tremor, or may manifest all the classic symptoms of paralysis agitans except the tremor. A more important clinical differentiation is the fact that with encephalitic parkinsonism, other residua, not found in paralysis agitans, are common. Among these are attacks of somnolence, muscular jerking, pupillary and oculomotor symptoms.

Hassin and Bassoe conclude that post-encephalitic parkinsonism and paralysis agitans are different pathologic entities; that degenerative lesions alone are present in classic paralysis agitans, but combined with inflammatory phenomena in parkinsonism. Other investigators have

*Presented before the Seventy-Fifth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 12, 13, 14, 1926.

shown that in encephalitic parkinsonism degenerative changes are more prevalent in the substantia nigra than in the lenticular nuclei.

As a late effect of encephalitis one finds all degrees of parkinsonism, from slight muscular rigidity and weakness with only a suggestion of the mask-like face, a slight increase of saliva and a diminution of the winking reflex, to complete helplessness. One case under my observation for over two years can not even turn in bed without assistance, so extreme is the muscular rigidity. Another patient never completely recovered from her acute attack in 1920, but gradually developed a typical parkinson syndrome plus lateral tract involvement, as shown by the presence of a double Babinski and ankle clonus.

Epileptiform attacks sometimes appear as part of the clinical picture of the acute stage of encephalitis, and when they do occur I have found that the seizures are apt to persist for a time after the other acute symptoms have subsided. Either petit mal attacks or convulsive seizures may occur. A case recently came under my observation in which an epileptiform attack occurred about four months after the onset, when the patient had no residua except exaggerated knee jerks and moderate asthenia. This is the only instance I can recall of an epileptiform attack developing as a late manifestation of the disease. One pitiable case, after six weeks of Christian science nontreatment, was turned over to me a few hours before she died in status epilepticus.

Myoclonic residua and late effects have been more frequent in my experience than choreiform movements. One patient developed a spasmodic torticollis eight or nine months after his acute attack of encephalitis, while another patient, a woman of thirty-nine years, had clonic spasm of all four extremities; also spasm of the muscles of the face and neck, fourteen months after the onset of the disease. Dystonia musculorum was suggested in this case by a tendency of the feet to strongly plantar flex at times in tonic spasm.

In still another patient, clonic, rhythmic spasm of the masseter muscle of one side, appeared during the acute attack of encephalitis and persisted for one and one-half years.

Spasmodic tics have been reported both as residua and late effects. A curious form of this symptom occurred in one of my juvenile patients who would abruptly expectorate, even in the midst of a sentence or at other equally inconvenient times.

Another child, a boy of twelve, had a tic-like spasm of the lower abdominal muscles which would recur at intervals of from fifteen minutes to two hours. This tic developed the second day of his illness and was as severe as ever when seen nine months later. He also had nystagmus and loss of the abdominal reflexes on one side.

Tremors are frequent both as residual symptoms or as a later development. The majority of the parkinsonian cases present a passive tremor, although many of these unfortunates have all of the classic symptoms of paralysis agitans except the tremor. General asthenia accompanied by a fine tremor of the hands is a common late manifestation.

Palsies of the extremities as late symptoms of encephalitis are not nearly as frequent as they are in the acute stage, the answer being that when they appear early they are apt to clear up. Especially is this true, in my experience, of paraplegia. Dr. Bernard Sachs, in a recent discussion of encephalitis before the New York Neurological Society, said he believed that encephalitis was much more common as a cause of apoplectic disease than it is supposed to be, and he spoke of seeing cases with loss of consciousness with a gradual development of hemiplegia. He stressed the fact that some of these cases cleared up with unusual rapidity, leaving scarcely a residuum of the paralysis. This has been my experience with cases in the Northwest and I shall refer to it again when I speak of atypical cases.

Among motor symptoms may be mentioned a curious, constant restlessness of the extremities, opening and closing the fingers, rubbing the hands together, crossing and uncrossing the knees. This I have seen in three or four cases, appearing after the acute symptoms have subsided and persisting for months.

Spasm of the ocular muscles is sometimes a distressing sequel. Bruno Fischer has observed a tonic spasm of the eye muscles, causing upward rotation, in five cases. The eyes were kept rotated upward for hours at a time, or even for days. As an illustration of ocular spasm I will cite the case of a young woman who had encephalitis in 1919. Thinking she had entirely recovered, she married three years later, and five years after the acute attack, while pregnant, she developed spasm of the eye muscles with the upward rotation as described by Fischer. At times also she would have difficulty in keeping her eyes open, due to spasm of the orbicularis. At the present time, seven years after the initial symptoms, she still presents the eye symptoms in association with a typical parkinsonian syndrome which also commenced during her pregnancy.

Her child was born without difficulty and is apparently perfectly well.

Pupillary disturbances not only persist as residual symptoms, but Hudovernig reported two cases of pupillary inactivity to light, developing two and three years respectively after acute encephalitis. This rare sequel has been observed also by Westphal, Economo and others. A far more frequent late manifestation of encephalitis is paralysis or paresis of accommodation, with preservation of the light reflex, the opposite of the Argyl Robertson pupil.

In comparison with the motor sequelæ, sensory symptoms are relatively unimportant. Paresthesias, such as sensations of burning, numbness or tingling, sometimes occur in the extremities, leading to the peculiar restlessness described under motor effects.

Other sensory sequelæ are localized pains, often radicular, and neuralgia.

Late trophic effects of encephalitis are rare, although muscular atrophy has been observed.

Adiposity as a sequel has been mentioned by numerous writers and was seen in two of my own patients.

Vaso-motor and secretory sequelæ are frequent and numerous. Of these, salivation is easily the most prominent, hyperidrosis being the next in point of frequency. Trophedema of the feet and localized vaso-dilatation have been mentioned.

Of special sense disorders, blindness secondary to optic neuritis, and deafness, occur infrequently.

Disorders of sleep. After the acute attack of encephalitis has passed, it is not uncommon to find a persisting insomnia, which may last for months, or, as in the case of one of my patients, for years. As a rule, the insomnia gradually disappears in a few months.

A distressing sleep disorder mentioned by numerous observers is a peculiar reversal, the patient sleeping in the day time, but being unable to sleep at night.

Somnolence sometimes occurs as a late effect but it is not a common sequel, as is insomnia. Spiller has reported three cases of narcolepsy, probably all post-encephalitic, and refers to cases reported by others. Spiller commented on the fact that a few years ago it was exceptional for a neurologist to see a case of typical narcolepsy. Yet three cases had come under his observation within a year and he had personal knowledge of a fourth case, described to him in a letter.

Practically all observers agree that mental sequelæ are found more often in children than in adults. Duncan, in a study of the relation of age to the severity of the mental sequelæ concluded that children under ten are more liable to severe mental after-effects, and that the liability diminishes in the next two decades.

Ebaugh tabulated the mental sequelæ observed in children as (1) changes in character and disposition, leading to behavior oddities; (2) insomnia with nocturnal agitation; (3) affective disorders of a depressive type; (4) hysterical reactions; (5) tics; (6) mental deficiency.

Certainly we find all types of mental disturbance after encephalitis, from the neuroses and psycho-neuroses, to dementia. Changes in disposition are common. Here are seen excessive irritability, unprovoked fits of temper, disobedience on the part of children, destructiveness, etc. Defective memory is a frequent complaint, according to Duncan, not severe, but often associated with difficulty in fixing the attention. Definite neuroses and psychoneuroses may also occur as sequelæ, and dementia in the younger children is not unusual. In nine children who were below the age of six at the time of the acute attack, Duncan found that six were mentally deficient after two or three years; the other three were normal.

McCowan says that certifiable insanity is rare as a sequel to epidemic encephalitis, and believes that many psychoses following encephalitis may not be true sequelæ, the infection acting merely as a precipitating factor. In my own experience primary insanity in association with encephalitis is rare. During the past year especially, in addition to the common finding of confusion and delirium, I have seen cases that would at the onset closely simulate dementia præcox or manic depressive psychosis, especially the depressive phase, but the resemblance was soon blotted out by the more typical symptoms of the disorder.

Max Meyer, in commenting on the mental changes sometimes associated with the parkinsonian sequel of encephalitis, speaks of the slowness of speech and of all mental processes. Apathy may become profound and depressive reactions he has found to be common.

Disturbances of respiration have been observed chiefly in children, usually associated with changes in character. Turner and Critchley classify these disorders as follows: (1) rate; (2) rhythm; (3) tics. The rate may be increased or decreased. The dysrhythmias are such conditions as Cheyne-Stokes breathing, breath-holding spells, sighs, forced or noisy expiration. Respiratory tics include yawning, hiccough, cough

and sniffing. The pathogenesis of these phenomena, according to Turner and Critchley, lies in a derangement of the involuntary psychomotor control of respiration and places the lesion at a higher level than the so-called respiratory centers.

The main features of the clinical picture in eight patients reported by Parker from the Mayo Clinic, were paroxysmal stretching, breath holding, grunting and forced noisy respirations. In others there was constant dyspnoea or tachypnea. A case of marked respiratory disturbance in a child, following encephalitis, was reported by me several years ago in a communication to the Philadelphia Neurological Society. During paroxysmal attacks of dyspnoea this boy would become cyanosed, frightened and slightly confused.

At first glance some of these patients with their bizarre performances suggest hysteria, but a careful history and examination will usually elicit the initial febrile attack (generally mild) or associated organic neurologic symptoms.

There respiratory sequelæ do not respond as a rule to any form of treatment.

Circulatory disturbances, especially tachycardia, are much more frequent in my experience as manifestations of late encephalitis than the respiratory disorders, and like the tachypnea, the tachycardia may be either paroxysmal or permanent.

As a rare sequel, polydipsia has been observed.

ATYPICAL CASES

A rather curious feature of encephalitis, observed both in this country and abroad, has been the fact that the clinical picture has varied somewhat from time to time in the same locality, in that different types or syndromes would predominate in different years. At first the common picture was that of eye symptoms (ptosis, diplopia and nystagmus), combined with somnolence. In another winter the majority of the patients presented hyperkinetic symptoms (choreiform movements, myoclonus, athetoid movements), with severe root pains. During the past few months I have seen an unusually high proportion of encephalitic patients with mental symptoms, often simulating definite forms of psychoses. There has been also an increasingly larger number of ambulatory or chronic cases.

For convenience of presentation, atypical cases may be divided into:

(1) Cases without fever.
(2) Cases with normal serology.
(3) Ambulatory cases.
(4) Cases simulating other condition.
  (a) Neurologic
    brain tumor
    apoplexy
    epilepsy
    neurasthenia
    hysteria
  (b) Psychotic
    dementia praecox
    manic depressive
  (c) Surgical
    appendicitis, etc.
  (d) Medical
    influenza
    pleurisy
    hyperthyroidism, etc.

A rise of temperature is the rule in encephalitis and is usually present at the height of the disease. The fever may be slight, lasting only for two or three days; usually it ranges from 101 to 103 degrees, running an irregular course for two or three weeks, sometimes longer. Rarely fever is absent early in the affection, but appears later as more serious symptoms develop.

In atypical cases fever may be absent throughout the course of the disease. Cruchet, in a committee report on epidemic encephalitis (1921), stated that in six of his cases there was malaise at the onset but no fever at any time.

During the height of the epidemic a pupil nurse came under my observation complaining of headache, diplopia and asthenia. Within a few days all her symptoms disappeared and within a couple weeks the nurse, against my advice, returned to duty in the hospital, only to have a reappearance of her symptoms. This case was seen at the onset and was under observation in the hospital throughout her illness, but at no time was there any rise of temperature. Recently I have seen other similar cases.

With an acute attack of encephalitis one expects to find a moderate leucocytosis and certain changes in the cerebrospinal fluid. Usually when a spinal puncture is made the fluid is under increased pressure, contains cells varying from 10 to 100 per cu. mm., globulin is increased, the sugar content is at the upper normal level or above and a mild colloidal gold curve is present. Occasionally from the initial epidemic and more frequently for the past year, I have been seeing cases of clinically typical lethargic encephalitis with the exception that they have normal leucocyte count and normal cerebrospinal fluids. At least such would be the case when the patients were seen in consultation. That abnormal findings would be obtained sometime during the course of the affection is probable, but my point is, that the diagnosis of encephalitis must at times be made without any help from the laboratory, except as certain conditions could be eliminated, such as syphilis and meningitis. The most constant serologic abnormality is increased pressure, although this is sometimes normal.

Ambulatory or chronic cases are becoming increasingly more frequent, and often present diagnostic difficulties.

One patient, under observation for several years and working most of the time, ran an intermittent fever for months, never higher than 100 degrees, yet usually registering between 99 and 100. During this time her leucocyte count was usually between 10,000 and 20,000. All possible sources of infection except encephalitis were eliminated, including tuberculosis and syphilis. Physical signs were variable; tachycardia was present for over a year. The abdominal reflexes were absent for a time, then reappeared. Weakness of one side of the face and of one arm and paresis of accommodation were occasional symptoms.

Another ambulatory case presented a very mild parkinsonian syndrome, yet by giving up laboring work and conducting a small store the patient has managed to keep going. For a long time this man would have passed for a neurasthenic.

Still another patient, first consulted me because of a general malaise and a slight unilateral orbicular spasm. As he had recently passed through a severe emotional strain due to the death of a favorite brother, his condition was thought to be neurasthenic and he was placed upon modified rest with immediate improvement and soon apparent recovery. About three months later he presented himself with numbness of the same side of the face as the former spasm. As no other symptoms were present, no definite diagnosis was made until a few weeks later, when he commenced to stagger in walking and developed a mild mental excitement with euphoria. Encephalitis was then suspected and confirmed by a spinal fluid examination.

Many of these chronic or ambulatory cases present no leucocytosis, no rise of temperature and no characteristic spinal fluid findings. The diagnosis in such cases is based upon the presence of multiple symptoms referable to the nervous system, the exclusion of such conditions as cerebrospinal syphilis and insular sclerosis, and by the history of the development and course of the disease.

Often one will be helped in doubtful cases by the finding of unequal or absent abdominal reflexes, fibrillation, marked increase in the knee jerks with a normal plantar reflex, a history of frequent hiccough or of somnolence, and especially of the characteristic sleep reversal.

Rarely a case of encephalitis will simulate brain tumor. I have seen optic neuritis not infrequently, and choke disc several times.

One's self-esteem is not enhanced by having a supposedly typical brain tumor patient promptly recover, after giving an unfavorable prognosis to the family.

An interesting case, at first thought to be brain tumor, then encephalitis because of the multiplicity of the symptoms, ultimately turned out to be a case of multiple brain tumor, six small sarcomata being found at autopsy.

On one occasion I was called in consultation to see a patient and found him with his head shaved, in preparation for an operation the following morning for supposed cerebellar tumor. The man had encephalitis with vertigo, headache and dysmetria as prominent symptoms.

Since the advent of encephalitis, I have from time to time observed apoplectiform attacks in people too young for arterial degeneration and without such etiological factors as syphilis, endocarditis, brain tumor, etc. Some of these patients would present in addition other symptoms definitely diagnostic of encephalitis, while in others, nothing could be found to warrant such diagnosis. We are at least justified in considering these cases as probably encephalitic when careful examination and history reveals no other cause. As already mentioned, a characteristic feature of apoplectiform attacks occurring as a manifestation of encephalitis is the rapid improvement or disappearance of the resultant palsies.

What has been said of apoplectiform attacks is also applicable to epileptiform seizures. In an earlier paper I called attention to the possibility of epileptiform attacks occurring as the sole clinical manifestation of encephalitis, and reported some cases in support of this contention.

An interesting atypical case was seen in February of this year. A student, age twenty-three years, without any premonitory symptoms, suddenly fell over unconscious, the attack being accompanied by occasional jerking of the muscles. The following day he had three spells of unconsciousness without muscular spasm. Following an apparently normal period in which he continued his studies, was a fourth attack one month later, accompanied by muscular rigidity, transient diplopia and vertigo.

Dull headaches, lack of energy, ready fatigue, vertigo and general asthenia follow encephalitis so frequently that one should always think of the possibility of a light or unrecognized attack of "sleeping sickness" when this syndrome is presented. On several occasions I have obtained a history of an attack of what was supposed to have been "flu" several months prior to the examination in such cases, and found slight but

unmistakable evidence of organic nervous lesions. Not infrequently careful questioning will elicit the fact that transient diplopia, blurring of vision or choreiform movements accompanied the so-called attack of flu.

Hysteria can simulate almost any known condition, so it is not surprising to find some of the bizarre motor effects of encephalitis interpreted as being hysteric in origin. This I have seen happen on several occasions. An equally unjust diagnosis of alcoholic intoxication was made by a hotel clerk in the case of one of my colleagues. The doctor had a combination of dysarthria and ataxia during a relapse in the course of his lethargic encephalitis, and was refused a room in the hotel because of the resemblance of his symptoms to inebriety.

It may seem like "stretching the point" to say that encephalitis may be mistaken for a psychosis, yet the diagnosis between this disease and dementia præcox or manic depressive insanity can not always be made in one or two examinations. A school teacher, age nineteen years, when first seen was frightened and depressed; she was hearing voices and entertaining the delusion that people were trying to come into the house to harm her. She was well oriented, talked incessantly but lucidly, except for her delusions. The onset had been gradual and her temperature was normal. No organic physical signs were found. Although the case was thought to be one of dementia præcox, diagnosis was withheld until a laboratory report could be obtained on the spinal fluid. This gave 12 mm. pressure, an increase of globulin, 9 cells per cu. mm. and 101 mgms. sugar per 100 c.c. of spinal fluid. In forty-eight hours the temperature rose, bulbar symptoms developed and within a week the patient died. I have seen initial psychomotor restlessness and euphoria in encephalitis simulate mania before passing into delirium. The same is true of the opposite phase of manic-depressive insanity. Lucidity, combined with marked depression, self-blame and suicidal tendency obscure the underlying infection.

As mentioned elsewhere in my paper, mental symptoms have been more conspicuous in the cases of epidemic encephalitis coming under my observation during the past few months than ever before; they have been, during this period, probably the most frequent clinical symptom.

I have seen cases of encephalitis diagnosed as pleurisy, because of the radicular pains on one side of the chest and I have known of a case in which the root pains were located in the abdomen, to be operated upon because of supposed abdominal pathology. Early in the epidemic, because of the frequency of eye symptoms, it was not uncommon to find that tonsillectomy had been performed, focal infection having been thought to be the cause of the trouble.

Because of the tachycardia and tremor so frequently seen as part of the pathology of encephalitis, the condition has sometimes been mistaken for hyperthyroidism. A metabolic rating is an aid to diagnosis, but one must always remember that encephalitis can and does cause both acute and chronic glandular disturbance, and I have seen both thyroid and pituitary dysfunction as encephalitic sequelæ.

Treatment – I have nothing new to offer in the way of treatment. Absolute rest and quiet with repeated spinal punctures as long as the spinal fluid pressure remains above normal, full feeding and free elimination have been my routine. With fever and headache, sodium salicylate in full doses has at times been of advantage. The Rosenow serum has not been of any value in my experience. I have not tried the turpentine abscess treatment.

In the parkinsonian cases, scopolomine and luminal have proved of definite value in reducing the tremor and adding to the patient's comfort.

In the chronic cases, arsenic has frequently been followed by definite improvement. In the acute stages, either at the onset or during a relapse, I feel that this drug is definitely contraindicated.

In closing, I would like to emphasize the following points:

The uncertainty of the prognosis.

The persistence and chronicity of the infection.

The prevalence of ambulatory and atypical cases.

The value of the combination of greatly exaggerated knee jerks with normal plantar reflexes, also changes in the abdominal reflexes, as aids in the diagnosis of atypical cases.

Last, but not least, the importance of obtaining a careful history of the onset, development of symptoms, and course of the disease.

Through snow and rain and over all sorts of roads, making quick jumps from school to grange to church, the Healthmobile carries its strange cargo of health. A powerful motor truck equipped with a four-cylinder generator, two motion picture projectors, films, wire cables, and posters is used to teach health lessons to the people in rural districts, and sometimes in the cities as well.—Hygeia.

ANALGESIA IN OBSTETRICS*

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Relief of pain in childbirth has usually been confined to the second stage of labor, and particularly to the actual time of birth. Not infrequently the result is much suffering at the end of the first, and the beginning of the second stage. Dependence has been placed on anesthesia, which is chiefly of value in the terminal stage of labor, as it interferes with uterine contractions. Since the enthusiastic reception of "twilight sleep" induced by morphin and scopolamin some years ago, considerable thought has been given to the development of a safe and efficient method of inducing analgesia in obstetrics. The Freiburg "Dämmerschlaf" is now considered ill suited for other than specially equipped lying-in hospitals with attendants trained to the technic. Even under these controlled conditions, the procedure is by no means devoid of danger. A safe and efficient method implies reduction of the sensibility of the patient to pain without hindering the progress of labor or endangering the mother or babe. Such analgesia ideally is permissible throughout the active period of labor.

The use of morphin alone in the first stage of labor is often attended with good results. Doses of ¼ to 1/6 grain given hypodermically will frequently lead to relaxation of a rigid or slowly dilating cervix, shortening this stage of labor besides affording the parturient considerable relief from pain. When morphin is given intramuscularly in combination with 2 c.c. of sterile and chemically pure magnesium sulphate (50 per cent), the period of analgesia is lengthened and the effect of the morphin is perhaps augmented.

In the Section on Obstetrics of the Mayo Clinic, the use of a suppository of 1.5 grain of opium and 0.25 grain of belladonna has also been beneficial. Its absorption in the rectum which has been thoroughly cleansed is rapid and its sedative and relaxing effect well marked. However, morphin is more uniformly effective.

In January, 1923, Gwathmey conceived the idea of ameliorating labor pains by morphin-magnesium sulphate injections and instillations of ether into the colon. This plan has been developed for use by the physician in homes as well as hospitals; it has been employed in more than 3,000 cases at the New York Lying-in Hospital. There were no more accidents or complications of labor among these patients than among those in which it was not used. The only contraindications to its use are colitis, true diabetes, and auditory disturbances.

Drugs Required

The few necessary drugs are easily obtained and carried. Sterile and chemically pure magnesium sulphate (50 per cent solution) can be secured in 2 c.c. ampules with or without morphin. The latter seem preferable, as morphin is usually given but once whereas the magnesium sulphate is repeated two or three times. The morphin is dissolved in 1 c.c. of sterile water and added to the contents of the ampule in the syringe just prior to injection. Triturate tablets of ¼ to 1/6 grain of morphin should be available for each case.

The solution for rectal instillation is made up of 20 grains of quinin hydrobromid dissolved in 2 or 3 drams of 95 per cent alcohol, to which is added 2.5 ounces of ether, and the mixture made up to 4 ounces with olive oil or heavy liquid petrolatum. This, together with another 2 ounces of the vehicle, is warmed to body temperature.

Quinin (alkaloid) may be used but the hydrobromid of quinin is more easily soluble in alcohol and hence more satisfactory. This is usually made up in powders of 10 grains each. Two of these are added to the first instillation, and should repetition be necessary, one powder of 10 grains is sufficient for the second instillation. Two or three drams of 95 per cent alcohol are needed to dissolve the quinin prior to mixing it with the ether and oil.

A one-fourth-pound can of anesthetic ether is usually sufficient for each case. Two and a half ounces are used for the instillation, and the remainder can be used at the time of delivery, if needed.

At the clinic olive oil or heavy liquid petrolatum is used as the vehicle, about 4 ounces for the average patient. Vaselin is used to protect the area around the anus.

Apparatus

The apparatus used is very simple, consisting of a 5-ounce glass or porcelain funnel to which is attached 20 inches of rubber tubing connected to a No. 20 French catheter by means of a glass union. An artery clamp is used as a stop. For injecting the morphin-magnesium sulphate solution, a 5 c.c. syringe with a long intramuscular needle is used. An ordinary hypodermic set is inadequate.

Technic

The directions for the management of the case should be followed closely, as the failures are often due to faulty technic or to too early admin-

*Read before the Webster County Medical Society, Fort Dodge, Iowa, April 27, 1926.

istration. When labor has definitely begun the patient is given an enema of soap-suds and injections of tap water until the return is clear. It is very important to have the rectum and lower colon clean, as much of the efficiency of the instillation depends on this. If the instillation of ether into the colon does not occur within eight hours of the first enema, another should be given.

It is important not to begin the injections too early as the pains may be stopped. As soon as contractions are strong and occur every three to five minutes, and last thirty to forty-five seconds, with 2 to 4 cm. of dilatation, and the patient complains of pain, 1/6 or ¼ grain of morphin in 2 c.c. of magnesium sulphate is injected deep into the gluteal or deltoid muscle. Half an hour later 2 c.c. of magnesium sulphate is given without morphin.

The patient is made comfortable, the room darkened, and noise excluded. If a good sedative effect follows these injections, the instillation into the colon is withheld until the action is nearly worn off and the patient again complains of pain.

If there is no relief from the injection, the instillation of oil and ether may be given in fifty minutes. The patient is turned on her left side with the buttocks slightly elevated and toward the edge of the bed. It is carefully explained to the patient that the purpose of the oil and ether is to relieve pain and that success depends a great deal on her cooperation. She is told that she will no doubt feel like expelling the mixture, and to avoid this is asked to breathe through her mouth, contract the sphincter ani and "squeeze up", when she has a pain. The area around the anus is smeared with vaselin in order to prevent a burning sensation, should a little of the mixture be expelled around the catheter. An ounce of warm olive oil is now run into the funnel, tubing, and catheter to exclude all air. The catheter is then clamped 8 to 10 inches from the tip and inserted under guidance of the finger to avoid coiling in the rectum. Should coiling occur, the entire mixture is retained in the rectum below the presenting part and is much more likely to be expelled. Half of the ether mixture is now poured into the funnel and allowed to run slowly into the bowel in the interval between three or four pains. The clamp is replaced during the pain, counter pressure made over the anus with a towel and the patient told to "squeeze up". The clamp may be removed during the first pain to allow the escape of gas which, if retained, would increase the desire to empty the bowel. It is for this reason that only half of the mixture is poured into the funnel, for were the funnel full some would be lost. When the catheter is once inserted, it must be held in place so that it will not slip out.

As the last of the ether mixture is leaving the funnel one ounce of warm olive oil is added and the fluid level allowed to run down until the meniscus appears in the glass union, the clamp is applied and the pinched catheter allowed to remain in place through a few pains, counter pressure being made over the anus during a pain. After slowly withdrawing the catheter between pains, counter pressure is again maintained through another pain. At this time another intramuscular injection of 2 c.c. of magnesium sulphate is given. The patient then may lie in any position she chooses and is watched. No vaginal or rectal examinations are made for at least an hour. One should not be misled by the quiet appearance of the patient, as the pains are coming at regular intervals. Their intensity, frequency and duration should be ascertained by palpating the abdomen.

Infrequently it becomes necessary to repeat the instillation; this should not be done with less than a two and one-half hour interval. The effect of the initial olive oil ether mixture is allowed to wear off, and when the patient again complains of pain a mixture of 2 ounces of ether containing 10 grains of quinin is instilled with the same technic and followed by the intramuscular injection of magnesium sulphate. Morphin is not given before this second instillation.

RESULTS

We have followed this technic at the Mayo Clinic during the last year with good results. No complications of labor have arisen which could be attributed to the method, nor have any babies suffered from its use. Operative delivery is no more frequently necessary. Indeed with the relaxing effect of the analgesia on the soft tissues the second stage is often shorter. Several babies have been delivered with no anesthesia by inhalation at the time of birth. These instances are rather striking. The patient sleeps in the interval between pains but arouses during the contraction and bears down efficiently. On being questioned several hours after delivery, she has little or no recollection of the birth.

The induction of analgesia is not a routine measure. The average multipara is carried along with morphin-magnesium sulphate, if necessary, during the first stage. During the second stage, the usual anesthetic is given. Occasionally a multipara with a scarred and slowly dilating cervix is encountered, and in such cases the syner-

gistic analgesia is very valuable. The patient who seems to derive the greatest relief from analgesia is the primipara with a primary occiput-posterior presentation, with or without premature rupture of the membranes. Labor is not only prolonged in the majority of such cases, but is more painful than in the average case.

DIAGNOSIS AND MANAGEMENT OF ABORTIONS*

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The word abortion is the term applied to all interruptions of pregnancy that occur before the child is viable, that is, before the twenty-sixth to twenty-eighth week. In contra-distinction to the term, premature labor, which includes all cases occurring after the child is viable. Miscarriage is a term used by the laity and the profession, that includes all cases in the categories just given.

It is said that almost half of the child-bearing women have had a miscarriage before the thirty-fifth year. Hegar said, "that there is one abortion to eight normal labors", but in all probability it is more frequent than this. In J. B. DeLee's private practice, 24 per cent of the women gave a history of abortion. Many abortions occur in the first weeks of pregnancy, and pass under the diagnosis of delayed menstruation, and many abortions are concealed, thus lowering the percentage as compared to normal labors at full term. In general, abortions occur more frequently in multipara than in primipara; oftener in the city than the country, probably because of the greater prevalence of gonorrhoea, and the easy access to the abortionist; oftener among the lower classes, except criminal abortion which is more frequent in the educated classes; more frequent in the first three months of gestation, and of the three, commonest during the third month, and more frequent after the thirtieth year,—race, color and civil state seem to have no influence. The frequency of abortion occurring from the eighth to twelfth week is due to the fact that the ovum is not strongly attached, and is weak and susceptible to outward influences. Marked changes are going on in the circulation. Since the woman is not sure of her pregnancy, she takes no care of herself, and many women consider it no crime to get rid of the ovum before "quickening", and think abortion is not dangerous in the early months.

As this paper deals only with the diagnosis and management of abortions, we will deal briefly with the causes and enumerate only the most common ones.

Fetal death always bring on abortion, and Mall says, "one-third of aborted foetuses are teratologic".

Diseases of the chorion, placental diseases, especially syphilis, white infarct formation and placenta praevia.

Diseases of the cord, torsion, knots and stenosis.

Diseases of amnion, and of the foetal body, including anomalies of growth, congenital weakness from ill parents, alcoholism, anemia, tobacco, etc. Acute infectious diseases, hemorrhages into the placenta, in nephritis in the mother, long continued and sudden high temperatures, toxemia, autogenic or exogenic, under the former being hyperemesis gravidarium, chorea and eclampsia.

Infection of the foetus acquired via the blood of the mother, the latter being apparently well. Pierrepont believes that toxins coming from septic conditions of the mother's mouth can cause abortion and premature delivery.

Maternal causes, include chronic endometritis, one of the most frequent causes of abortions, chronic metritis constituting the so-called irritable uterus, malformation of the uterus, acute infectious diseases of the mother, sepsis by killing the ovum, brings on an abortion. Maternal syphilis is a frequent cause of abortion by either passing over to the child or destroying it by changes in the decidua. Trauma or violence play no important part in the causing of abortions, but anaesthesia may cause death of the foetus if too prolonged or attended by great cyanosis. Habitual abortion means that successive pregnancies are interrupted usually at the same period of development—syphilis is found the active factor in 60 or 70 cent, and especially in miscarriages of the later months. Chronic endometritis is more frequently a cause of repeated early abortion than in the later months, and is often combined with uterine displacement and each abortion aggravates the endometritis and a "vicious circle" is established.

Symptoms—Clinically there are three forms of abortion, namely: Threatened, In Progress or Inevitable and Incomplete, and four classic symptoms are present in all. These are: uterine pain, uterine hemorrhage, softening and dilatation of the cervix, presentation or expulsion of all or parts of the ovum.

Diagnosis—If the fact of normal pregnancy is known, uterine hemorrhage and uterine pains

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signify that interruption of gestation threatens. It is not easy to diagnose early pregnancy, when the uterus is contracting, for then it simulates other conditions, for example—fibroid, chronic metritis or ectopic ovum. On bi-manual examination the large contracting and relaxing uterus, the beginning softening and shortening of the cervix and the bloody discharge show that some abnormal process is going on. The rule is to treat every case of hemorrhage after a period of amenorrhea occurring in a woman capable of reproduction, as one of abortion. Differential diagnosis must be made from ectopic gestation, hemorrhage from cervical erosion, which are not rare, varices (rare) hydrorrhea gravidarium, and in addition all the conditions not associated with pregnancy, such as: neoplasms and malpositions. After pregnancy is determined, the differential diagnosis in abortion has to deal with ectopic gestation, and this condition must always be taken into consideration. Rarely does the extrusion of a polypi or a fibroid simulate abortion. Only the most common difficulties in diagnosis can be considered and will be given in the order of frequency.

ABORTION

1. Onset is quiet with gradually intensifying and regular pains in back and the lower abdomen.
2. External hemorrhage profuse or moderate with clots.
3. Symptoms of hemorrhage proportionate to visible blood loss.
4. Discharge of parts of ovum.
5. Demonstration of ovum in uterus or empty uterus and empty pelvis.

ECTOPIC PREGNANCY

1. Onset stormy, irregular and colicky pains, sometimes few and excruciating, localized on one side.
2. External hemorrhage slight or absent, and dark fluid.
3. Symptoms of hemorrhage and shock much greater than visible blood loss.
4. Only a uterine decidua if anything—no villi.
5. Finding of a mass alongside the uterus.

My surgical friends tell me that the backache of abortion, and the lack of it in ectopic gestation is a valuable aid in the differential diagnosis of these two conditions. In my own limited experience, I find that pain and pressure in the rectum is a symptom in ectopic gestation, that is lacking in an abortion.

Inevitable abortion is more easily determined. The cervix is shortened, the external os is dilated, allowing the finger to feel the ovum, pieces of the decidua or of the ovum are expelled, hemorrhage is more profuse, the bag of waters are ruptured, and painful uterine contractions are present.

Incomplete abortion presents more difficulties in the diagnosis, and the methods of treatment to be employed. The first question to be considered is: is the uterus empty? Here the history of the passage of the foetus or portions of the placenta may be useful, but unless seen by competent eyes, the information is questionable. We conclude that something is left in the uterus when a woman who has had an abortion continues to have irregular hemorrhages, with or without pain or discharges bloody lochia with clots or bits of tissue for a long time. Examination reveals a large, soft, subinvoluted uterus, with a patulous cervix through which the finger feels, shreds of decidua, placenta or clots, and in some cases it is not possible to make a diagnosis without curettage.

Few women die of hemorrhage during abortion, but if the hemorrhage is long continued, the unavoidable loss during the abortion may prove fatal. Death is usually due to infection introduced from without, more often by the criminal abortionist, and less often by the unfortunate, legitimate physician who is often called upon to clean up these infected cases. If it was always possible to differentiate the criminal from the unintentional or unavoidable cases, there is no question in my mind that all ethical physicians would be justified in refusing to attend abortions that were the results of criminal actions and intent. It is always safer on the part of the attending physician in any case of abortion to insist on council. I well remember in my earlier years of practice of being called to a case of incomplete abortion, that I felt sure was the work of a near by abortionist or "regulator". The uterus evidently was not completely empty, there being a foul, bloody discharge, chills, and a temperature of 105 degrees, and things looked bad generally. It was my good fortune to have as council on that case a man who had evidently had some experience with the instigator of the trouble in the case with which we were dealing, and he suggested that we call in the author of the job, and I might add that the woman had no hesitancy in telling us who it was. After much argument and demurring he came, and after considerable persuasion assisted us in cleaning up the case, which was done by a thorough curettage under anesthesia, and douching of the uterus. The first twenty-four hours after the curettage were very stormy, with the temperature remaining at 105 degrees, after which it dropped, and the woman made an uneventful recovery. The cause of all the trouble

was very much crest-fallen after the proceedings, and expressed great surprise at the contents of the uterus, as he said, "he thought she had only taken a cold and delayed her period, and all he had done was to pass a small male sound "to bring her around", and she came around with a vengeance.

Treatment

Threatened abortion should be treated by absolute rest in bed, morphine and uterine sedatives may be used as needed. The bowels should not be disturbed for at least three days. Then castor oil given, its action being anticipated by an olive oil enema. After the bleeding stops the patient may be allowed more freedom in bed, and after five days can get up and resume her usual duties, slowly. One should not allow repeated hemorrhages to debilitate the woman. Horse serum or calcium salts are useful in these cases, and frequent blood tests to determine the degree of anemia should be made.

Inevitable abortion: Much difference of opinion exists in the treatment of abortion in progress as practiced by different authors, and no one plan will apply to all cases, but the ideal treatment would be watchful expectancy, meeting the conditions as they arise, as we do in our labor cases, and resorting to active interference when indicated. If hemorrhage is continuous, whether profuse or not, the cervix and vagina should be packed, and there is little objection to the tampon if the usual precautions of surgical asepsis are observed. The patient is prepared as for any vaginal operation, and the cervix is first packed with a strip of gauze, which extends up into the uterus, then the vault of the vagina is filled with pieces of dry sterile cotton in layers, and packed firmly, including the upper two-thirds of the canal, the lower third should be packed lightly to avoid pressure on the urethra. Apply a gauze pad, a "T" binder making firm pressure and put the patient to bed. The tampon is allowed to remain from sixteen to twenty-four hours. During this time the patient will have pains which means that the uterus is trying to expel its contents. If on removal of the tampon the cervix is not dilated, it is safe to tampon again, and wait another twenty-four hours, but on removal of this pack, it is best to make preparations for a curettage. If the cervix is open enough to admit one finger, the uterus should be emptied under ether anesthesia. The methods of removal are varied, if the ovum protrudes through the os, it may be grasped and removed. Forcible dilatation of the cervix is an unsafe procedure even in expert hands, and should be done with extreme delicacy and care. It is possible and evidently good treatment to remove the contents of an aborting uterus with the finger and is probably a safer method than the curet in the hands of a general practitioner. In using the curet, make use of the broadest one that will go through the cervix, and exert slight pressure on the scraping edge, and always draw the instrument down and through the cervix with a slow even gentle sweep, going over the anterior and posterior walls, then the corners of uterus, then the fundus from one tubal opening to the other. It is best to finish this process by introducing the finger in the uterus to see that all debris has been removed, and that the uterine cavity is smooth and clean.

The treatment of incomplete abortion is practically the same as for abortion in progress, except the element of time. These cases are generally of longer duration when we see them, and we have the two courses of treatment for selection, either immediate curettage, dilating the uterus if necessary or packing the uterine cavity, tampon the vagina and wait for the uterine contractions to expel its contents. If the os is dilated sufficiently the safest treatment is probably immediate curettage, thus ending the case at once.

Septic abortion,—when the cavity of an aborting uterus becomes infected we speak of septic abortion. Most of such cases are the result of criminal interference by mid-wives or other abortionists or even the patients themselves. I know of one case where a woman has produced abortion on herself three times by the use of a crochet-hook. All attempts were highly successful from her standpoint, and required little assistance from the attending physician, who was unfortunate enough to be called in to administer to her. Formerly the accepted treatment of septic abortion was the immediate emptying of the uterus by forcible means if necessary. Experience, however, has taught us that this method carried certain risks with it, and that it is not always dangerous to leave a uterus full of infected ovum, to the powers of nature. It has been found that the traumatism of curettage, digital as well as instrumental may be fatal, and a superficial and not dangerous infection being converted into one with strongly invasive qualities. The chill and high fever which so often result from uterine manipulations in septic abortion are the expression of the flooding of the system with bacteria, and toxins. If we knew a virulent, invasive organism to be the cause of the infection, extirpation of the uterus would be the best treatment, but science does not yet permit us to prove this in time for action. An-

other point in favor of the expectant treatment of septic abortion is the fact that the presence of the infected ovum in the uterine cavity stimulates the formation of anti-bodies in the blood that materially assists nature in throwing off the general infection. If there is no hemorrhage, place the patient in the Fowler position, clean out the bowels, push the liquid nourishment, and fluids, plenty of fresh air and wait and watch. After the temperature has been normal from five to ten days evacuate the uterus if nature has not already done so. Pituitrin and ergot may be administered, but J. B. De Lee says that he finds them of little value. Personally I think the administration of quinine and ergot is of some value in these cases. Hillis studied one thousand consecutive cases of abortion admitted to the Obstetrical Service of Cook County Hospital to determine the following points.

1. Relative value of active or operative or non-operative therapy as applied to: (a) febrile and (b) afebrile cases.

2. The effectiveness of a five day period of normal temperature between the last day of fever and a curettage in febrile patients.

3. The effectiveness of a five day period of normal temperature elapsing between the day of admission and a curettage in afebrile cases.

4. The frequency of bleeding severe enough to threaten life in abortions under three months. He concludes: (1) conservative treatment of abortion in febrile cases gives better results than active therapy; (2) febrile patients who have a five day afebrile period have a greater tendency to continue a normal temperature after curettage than those who are operated upon before the end of this period; (3) afebrile patients with a five day observation period have a greater tendency to remain with a normal temperature than those who were curetted before the end of this rest period; (4) approximately 6 per cent of patients must be emptied because of alarming hemorrhage; (5) a plan of procedure which embodies a conservative rest period of five days, normal temperature, therefore seems to be a rational method of treatment for abortion.

Bovin states that the abortion was incomplete in about 30 per cent of the three thousand eight hundred and six deliveries in eleven years in his service. Strictly expectant treatment was applied in 54 per cent of the one thousand one hundred and forty-one febrile cases, and the mortality was only one and three-tenths per cent. The mortality in the five hundred and eighteen cases in which active intervention was tried was two and nine-tenths per cent. In two hundred and six cases the obstetrician's hand was forced by menacing hemorrhage, and the mortality in this group was two and four-tenths per cent. The mortality was one and nine-tenths per cent in one hundred and fifty-six febrile cases in which the uterus was not evacuated until the fever had subsided, while it was eight per cent in seventy-five cases in which the subsidence of the fever was not awaited. His experience indicates that it is safer to wait for at least six days after the subsidence of the fever before evacuating the uterus.

H. K. Tuttle reports one thousand one hundred and sixty-three cases of abortion treated in the Ancon Hospital, Canal Zone from the years 1904 to 1923, with the statement that it has always been the policy in this hospital to empty the uterus by operative procedure in all cases of abortion when membranes and placental tissue remain in the uterus, but he also says that he finds the method of J. B. De Lee, of packing the uterus and vagina, very efficient in controlling hemorrhage, and when the packing is removed at the end of twenty-four hours the foetus and secundines usually come away with the packing or may be removed from the cervix with ovum forceps under anesthesia. The mortality rate in his report is two and twenty-three hundredths per cent in one thousand one hundred and sixty-three cases. Of the fatal cases eleven were due to abortion, and fifteen to various diseases causing the complicating abortion.

O. A. Gordon reports nine hundred and sixty-one consecutive cases admitted to Bellevue Hospital with a mortality of one and nine-tenths per cent. The author concludes that all cases of abortion threatened, inevitable or incomplete, should be treated conservatively until it is demonstrated that conservative treatment has failed. Conservative treatment will fail in something less than four cases in a hundred. The mortality and morbidity in abortion cases is in direct ratio with the degree of intrauterine intervention. Curettage in abortion transforms many aseptic into septic cases.

G. Winter gives the following conclusions: Where a bacteriologic examination cannot or is not made the uterus should not be emptied for four or five days after the temperature has dropped to normal. Spontaneous expulsion of the ovum should be aided by means of quinine. Hemorrhage should not cause one to empty the uterus hastily, and complicated abortions should not be curetted. The dull curet is better than manual removal of products of conception.

The non-interfering policy of the treatment of abortion in general, is gaining adherents every year, and watchful waiting in septic abortion is

growing in favor even faster, whereas in former years an infected ovum was removed at once. Experience is accumulating, which is proving that it is not alone safe to leave such a case to nature, who will expel the offensive mass or raise barriers against it, but also is showing us that it is dangerous to interfere with the processes of nature. Such interference may transfer the infection from the ovum to the uterus itself, and change a simply local putrid infection (a condition we formerly called sapraemia) into a general or invasive one (a condition called septicaemia). The treatment of septic abortion requires mature judgment and surgical treatment. It is difficult to standardize, and no one method will apply equally to all cases.

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A STUDY IN IMMUNOLOGY*

R. E. Gunn, M.D., Boone

At least a meager knowledge of immunity was possessed by the ancients. It is a field in which an enormous amount of intelligent effort has been expended. The results have been fruitful. Much remains to be done.

Immunity is specific and general, local and systemic, natural and acquired, racial and individual, active and passive.

Racial immunity is well illustrated in the mildness with which whites have the febriculæ as compared with the severity manifest when aboriginal communities first come in contact with such infections. After a few generations of contact with civilization this susceptibility decreases markedly. Mass[2] immunity is fairly well illustrated by the relatively lower morbidity rate among city bred boys in the cantonments during the late war. On the other hand, immunity may be a very personal matter; as when all members of a family may recover nicely from a specific fever except one who may scarcely survive and may thereafter lead a life characterized by poor health.

Immunity may be influenced by very unspecific things, such as chilling, overeating, fright, injury, and undernourishment. Even a brain abscess, latent and doing no apparent harm, has been known to be reactivated and cause death, following a digestive upset. Nukada[1] has shown that one may be immunized against typhoid by injection of vaccines other than typhoid. Injections[2, 3] of foreign protein such as milk or peptone may greatly benefit certain asthmatics and arthritics and even people suffering from migraine, urticaria, or choroiditis. The globulins in the milk are said to be chiefly responsible for the immunological reactions it induces.

H. Gideon Wells[2] contends there is a definite chemical reaction for each specific type of immunity, which the skilled chemist may define more or less accurately.

A measure of immunity[4] is transmitted to calves through the colostrum of the cow. The same relation undoubtedly holds between infant and mother.

Organs and tissues which produce immune bodies are various. Immunity may be more or less local, at first, and later become general. The engulfing[5] and neutralizing power of the peritoneum of some animals may be as much as 100 to 200 times that of the skin in case of intracutaneous injection. Yet skin immunization may make the animal immune while the peritoneal route of injection may fail to induce immunity of the skin or general systemic immunity. Koch was inclined to believe that the leukocytes, with their secretions were just about the sum total of the immunity mechanism. They are important but they represent only a fraction of the body defences. The macrophages or clasmatocytes, seem to be much more important. These cells are especially abundant in the peritoneal and pleural exudates. They also occur in blood-vessels, notably capillaries and in connective tissue spaces. Their engulfing power is very great. That they produce enzymes and immune bodies seems proven. The liver[6] and spleen play a large part in the mechanism of immunity, especially the liver. At Stanford University[7] they have proven that dog lungs do not manufacture antibodies. J. A. Brown[8] has produced local and slight general immunity in guinea pigs by perfusing the conjunctivæ with diphtheria toxin and also by use of killed bacilli. To get full results by use of toxin only, the conjunctivæ had to be abraded. No one yet can exactly define the tissue field in which immunity is made.

Zinnser[9] of Harvard says there is a marked similarity between idiosyncrasy to a drug and hypersusceptibility to bacteria or their toxins. In either case the surviving cells take on a remarkable change which usually lasts for life.

*Read before the Boone County Medical Society, November 20, 1925.

Hypersusceptibility and immunity are apparently very closely related conditions.

A few rather recent advances[9] in practical knowledge of immunity have occurred. Dicks have found that the streptococci in scarlet fever produce a heat resisting culture filtrate which will cause the horse to produce antibodies capable of protecting children who have not had the disease, just as is done in the preventive, passive, treatment for diphtheria. J. T. Parker[9] says that staphylococci produce soluble toxins. Pneumococci produce toxins which may be neutralized with a solution of antibodies, and the patient saved oftentimes, if one will use it very early, before there is time to certify the diagnosis and before the bacteria are barricaded in an impenetrable focus. If one adopts the plan of giving an adequate dose of antibodies to each patient who falls suddenly ill with a chill, sudden rise of temperature, and a stitch in the side, he will waste some ammunition, naturally, as not all the patients would prove to have pneumococcic infection, but it would appear that if a solution of antibodies is to do any good, it must be used before the invaders are fully fortified. Many observers agree that serum treatment of pneumonia, to be of value, must begin very early. Just how valuable is such treatment, so given, will be learned in time. In the meantime any tried old method yields a high mortality, especially in the aged.

In the case of tuberculosis[9] there seems to be no immunity without the formation of tubercles. I understand by this that tuberculin is useful only to those already infected.

In the case of syphilis[9, 10] there must be living spirochetes in the tissues or else no immunity exists. In other words a patient entirely cured may be infected as readily as at first.

The filtrable viruses[9]—poliomyelitis, rabies, encephalitis and herpes—in order to produce immunity must be alive. They may be attenuated by dilution, by animal passage, and by drying, but they must be alive to produce any immunity. One cannot but wonder at the sagacity of Pasteur who worked out a safe and sure plan of immunization against rabies while bacteriology and a modern conception of immunity were in their very early infancy.

Summary: A mere fraction of the subject of immunity is solved. Increased knowledge of the subject will probably increase the span of life and the comfort and happiness of the race.

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SCABIES
(Itch—Seven Year Itch—Norwegian Itch)

ROBERT E. JAMESON, M.D., Davenport

Scabies or itch is known under several names. It is seen at all ages, in all races, in all ranks of society and at all seasons of the year, most frequent during the winter months. Children are more often affected than adults. Once scabies has affected the patient, it will remain for weeks or months, in fact until treated and cured. Scabies may appear in epidemic form, in certain localities.

Scabies is caused by the itch mite, which burrows under the skin. This will cause itching which may become intense, and is usually more noticeable at night than during the day. The irritation caused by the itch mite will sooner or later cause a dermatitis or eczema to develop with intense itching, the patient may notice this itching after they have been treated and cured of the scabies, and the remaining itching many times misleads the patient to believe that the itching is due to scabies, that it has not been successfully treated, and this will cause the patient to again reapply the itch ointment, which will increase the irritation. Dermatologists have from past experiences learned that this itching following treatment may be noticed, they so inform the patient of this possibility, and guard against the possibility of the patient mistaking the itch symptom, for an itch infection. The itching which follows after a successful cure of scabies can be readily cured by applying soothing lotions as calamine, etc.

During the present fall and winter I have seen a greater number of cases that in any former year, and have learned that surrounding rural districts have also noticed an increased number of cases. In a newspaper report from a neighboring state, the news item states that patients have suffered so severely from intense itching

that physicians have been repeatedly called during the night to relieve the itching.

Scabies is readily cured by proper treatment. Patients however must realize the importance of thoroughly understanding the instructions given them, and the instructions must be carried out to the letter to secure relief and a cure, which will follow if the patient has a bath tub, hot water, soap, clean sheets, blankets or quilts, under garments, etc.

We have today two methods of treating scabies, the "Danish ointment", Marcussen's formula, or as it is sometimes called, "The one day treatment for the cure of scabies". The second method is "The Three Day Treatment for the Cure of Scabies". Either method will be found successful when properly carried out as directed by a dermatologist. The general practitioner is too busy usually to pay attention to the treatment of scabies, hence the great number of failures and misunderstanding of the importance of detailed and minute instructions to patients, and to the complications which may accompany scabies when a person is affected with it for a few days or longer, as dermatitis and eczema are common complications and mislead the patient to believe that they are still infected with scabies due to the intense itching following even successful treatment for its use, as dermatitis or eczema will also cause severe itching and unless recognized and properly treated will if the itch ointments are repeatedly applied cause more and more irritation. If the dermatitis or eczema is recognized and properly treated it is readily cured.

Instructions to Patients for the Preparation and Treatment of "The One Day Method for the Cure of Scabies"

1. Bath tub, hot water, soap. If an adult patient, a hand brush. If a child, Turkish toweling or other rough material, these to be used to scrub the body with during bath, to break open the burrows in which the itch mite is embedded, and so that the itch ointment applied will come in direct contact with the itch mite, and kill them.

2. Remove the sheets and pillow cases, quilts, blankets, etc., from the bed, place the sheets on the floor separately. In one sheet place all the wearing apparel such as undergarments, socks, stockings, mittens, gloves and towels used, if they are to be washed with the family wash. In the other sheet place overcoats, neck pieces, skirts, trousers, as the case may be, and other wearing apparel which is not practical to wash, they to be sent to the cleaners.

3. Patient to take a full body bath in hot water, use a heavy soap lather, scrub the body thoroughly with a hand brush if an adult, or Turkish or other rough toweling if a child, to take at least thirty minutes for bath, the object is to soften skin so that the scrubbing will more readily open the burrows and expose the itch mites.

4. Dry the body thoroughly by rubbing with a rough towel. Apply the one day ointment over the affected areas, rub in lightly leaving a fairly heavy coating of the ointment on the parts affected. This is to remain on during the night and following day until bed time, when a second bath is to be taken for the purpose of cleaning the body and removing the ointment. The patient is to have clean sheets and pillow cases on bed after first bath, also clean undergarments, the undergarments to be changed again following the second bath and clean sheets and pillow covers, quilts or blankets, and under and outer garments to be worn. This completes the one day treatment and if it has been carried out successfully the patient will be cured of scabies.

5. If the three day treatment is to be employed the patient is to change the sheets on bed, pillow cases, quilts and blankets also to be removed and washed or sent to the cleaners and the bath with above instructions used in the one day treatment, undergarments to be changed and worn after each bath. The sheets, pillow cases and undergarments do not necessarily have to be changed after each bath, but when the third bath is taken then change sheets, pillow cases and undergarments and quilts, blankets, etc., also clean suits or dresses and outer garments to be worn, and the ointment applied after each bath for three successive days. The ointment used in the one day or three day treatment will bite and sting when applied, but for a short time only.

The ointment used for the three day treatment and found satisfactory is the following:

℞ Sublime Sulphur	Drams VI	
Balsam Peru	Drams IV	
Beta Naphthaol	Drams II	
Benzoated lard		
Petrolatum AA ADD Q.S.		℥ IV

Sig.—If the patient is an infant this formula is to be reduced ¾ with petrolatum, if a child ten or more years old reduce ½ with petrolatum, if an adult use full strength.

Complications Following Treatment for the Cure of Scabies

Patients cannot be too thoroughly impressed with the possibility of a cure, which is readily made whenever detail is understood by the patient. Private patients will as a rule carry out the instructions given them. Patients seen in

clinics will not understand or realize the importance of carrying out the instructions. Fortunately in the skin clinic held at the Davenport Visiting Nurses Cottage all patients found suffering with scabies are taken to the Nurses Cottage where bath tub, hot water and soap are to be had and are used freely by the nurse and our results have been most gratifying. A word of warning to private patients should be given them that an itching may follow after a cure has been made, that itching following treatment and cure of scabies invariably follows especially if the patient has had the scabies for a few days or longer, and the itching following is due to an irritation caused by the itch mite in the skin, causing an irritation which is relieved by the patient by scratching, which causes a dermatitis or eczema, this is readily recognized by the dermatologist and quickly cured. Mild soothing lotions will stop the itching and allay the redness, itching and irritation noticed, in a week or two weeks at most. Do not use ointments if an itching is noticed following treatment for scabies, impress this upon the patient. Request them to call and be re-examined if necessary and that itch ointment is to be used but one time for one day treatment and applied three times in three successive days for three day treatment.

SUMMARY

Itch is readily cured, patients must have the necessary facilities for carrying out the treatment such as bath tubs, changes of clothing, etc.

Children in schools, or institutions who have redness, papular eruptions with a history of vesicles, later pustules, itching on the hands, between the fingers, under the garters, on the waist line, and on the buttocks of infants, in women under the breasts, or on the nipples, in men on the genital organs and other areas, will indicate the presence of scabies.

Dermatologists have found that four ounces of the ointment is sufficient for an adult for one treatment. Patients should not be given the prescription as they will in some cases regardless of the physician's warning apply more itch ointment, this of course will increase the itching and patients have been known to repeatedly apply the ointment, which of course increased the irritation and itching, due to increased irritation of the dermatitis or eczema. Mild, soothing lotions are indicated to allay the irritation. Family doctor books so dear to the heart of many patients are misnomers and patients will find that scabies which is by many considered lightly, unless they are affected with scabies themselves, they then will realize that scabies is a positive stern reality, and they usually seek relief, which can be readily given with proper treatment and a cure is insured.

KNOTTED RUBBER TUBING IN BLADDER—CASE REPORT

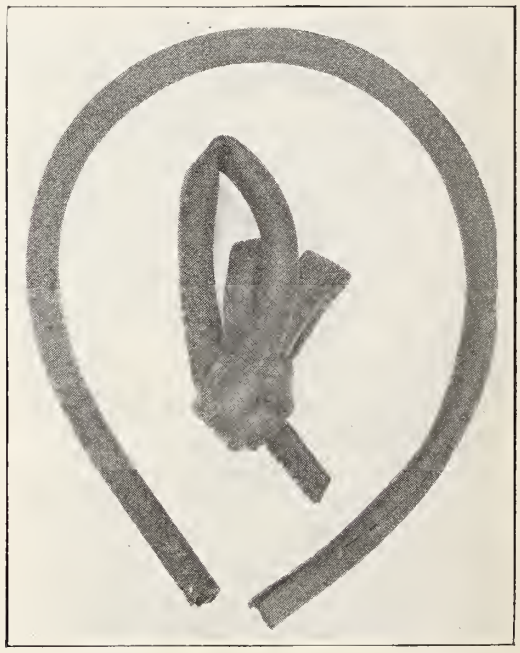
C. L. HEALD, M.D., Cedar Rapids

Foreign bodies in the urinary bladder of various and bizarre kinds have been reported since the beginning of medical literature.

I considered the following case unique until a search of the index catalog of the surgeon general's office revealed a similar one.

C. B., a farmer, aged twenty-three, married; on the night of September 3, 1924, introduced a piece of rubber tubing into his urethra and bladder. On trying to pull it out he found that it was fast. On the following morning a physician was summoned who, with his assistant, etherized the patient and made strong traction on the tube without avail.

When I saw the patient two hours later his temperature was 103, pulse 126. A cheap, red rubber



Knotted Tube from Bladder

tube one-half inch in diameter protruded ten inches from his penis. A little bloody urine had escaped around the tube.

The patient was taken to the hospital and a suprapubic cystotomy, under ether, was done. On opening the bladder the knotted tube was seen, lifted up with forceps, the tube below the knot cut with scissors, the knot extracted and the lower portion of the tube pulled out of the urethra from below.

The bladder incision was sutured around a rubber drainage tube, the wound closed, and a soft rubber catheter secured in the urethra.

The temperature and pulse became normal within a week and recovery followed.

The knot was drawn so tight that it was impossible to untie it. The tube was estimated to be about two feet long.

Dr. Wm. J. Anderson, night warden of the Cook County Hospital, Chicago, reported a similar case in the Journal of the A. M. A., June 22, 1912. In Dr. Anderson's case the rubber tubing (not a catheter) was about No. 12, French, in size and was introduced by the patient to relieve retention of urine. Traction failing to withdraw the tube, suprapubic cystotomy was done and the knotted tube removed. Bladder drainage was instituted and the patient recovered.

UNUSUALLY LARGE FOREIGN BODY IN RECTUM—CASE REPORT

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The following case of a foreign body in the rectum is reported on account of two unusual features; first, the nature of the foreign body, and secondly, the unusual lack of tonus of the musculature of the rectum and sigmoid.

O. S., age fifty-four, single, no occupation, residing in one of the better residential districts of St. Louis, entered the City Hospital on June 17, 1925, as an emergency case. Patient did not complain of very much discomfort but rather petulantly spoke of being aggrieved at himself for what he termed his "foolishness" in allowing a large bottle to "slip" out of his hands up into the rectum. Patient stated that he was pouring oil on his hemorrhoids and suddenly the bottle slipped into his rectum. On rectal examination there could be felt a smooth glassy surface similar to the bottom of a glass tumbler far into the rectum. On abdominal palpation a firm smooth rounded mass could easily be felt, in fact, the abdominal wall protruded slightly at a point midway between the symphysis and umbilicus in midline.

X-ray showed a mass in the rectum described as "a foreign body resembling a water glass which is intact".

Attempts to remove the glass were in no wise painful to patient, manipulations of the glass forward, however, caused the patient to complain of pain in the supra-pubic region of the anterior abdominal wall. These attempts being unsuccessful, patient was taken to the operating room with a view of removing the foreign body under ether narcosis if necessary through the anterior abdominal wall. As soon as the patient was anesthetized the rectum which was already very loose and atonic was dilated manually and a large sized hand was inserted, the mouth of the bottle reached with the fingers and the foreign body easily extracted. Proctoscopic examination showed no rupture. The foreign body proved to be a tall mustard or pickle jar 14 c.m. in heighth and 17.5 c.m. in circumference.

Patient refused to admit any story other than the very unreasonable one told at admission. He would not admit any erotogenic perversions but did not, in any way, show any resentment at the many remarks of a very depreciative nature made in his presence but rather smiled and seemed to think it was all due to some cleverness on his part. A rather cursory mental examination did not show any departures from the normal mentality—patient was a well-read and surprisingly bright individual—used very good English and was emotionally very stable.

Patient stayed in the hospital for three days and as he has shown no signs of any further trouble he was allowed to sign a release and was discharged.

ISOLATION OF THE GONOCOCCUS FROM CHRONIC URETHRITIS

Clarence C. Saelhof, M.D.
John McCormick Institute for Infectious Diseases, Chicago

Chronic urethritis is the ban of the urologist. Acute gonorrhea disappears under adequate treatment and consecutive negative smears for the gonococcus are obtained under prolonged stimulative treatment. In a number of instances, the patient will return after a varying period of time with the clinical symptoms of a chronic urethritis. Smear preparations stained by the method of Gram will always show the predominance of a secondary invading organism, usually the staphylococcus. However, in the light of recent development for the isolation and cultivation of the gonococcus, it was assumed that in these instances of chronic urethritis, the gonococcus might be obtained, if suitable technique was employed.

Grimberg[1] states that by his method, he was able to obtain the gonococcus in 85 to 90 per cent of cases of chronic urethritis. He is of the opinion that besides lodging in the prostate gland, the gonococcus also invades the seminal vesicles and particularly the liquor seminalis. He states that other organisms may gain prominence, but chronic urethritis is due to the gonococcus.

1. Jour. de med. de Par., 1925, xliv, p. 315.

TABLE 1

Case*	ORGANISMS					
	GONOCOCCUS	STAPHYLOCOCCUS			BACILLUS	
		albus	aureus	citreus	coli	diphtheroid
J. C.	Positive on 1st trial	+	0	+	0	0
J. K.	Negative on 3 trials	+	0	0	0	0
L. V.	Negative on 4 trials	+	0	0	0	0
N. O. C.	Negative on 3 trials	+	0	0	0	0
A. J.	Positive on 2nd trial	+	+	0	0	0
J. S.	Positive on 1st trial	+	0	0	0	0
M. J.	Negative on 6 trials	0	0	0	+	0
C. B. L.	Negative on 3 trials	+	0	0	0	+
J. L.	Negative on 3 trials	0	0	+	0	+
N. P.	Negative on 3 trials	+	0	0	0	0
R. R.	Positive on 1st trial	+	0	0	0	0
J. W.	Positive on 3rd trial	+	+	0	0	0
C. H.	Negative on 3 trials	+	0	0	0	0
C. K. P.	Negative on 4 trials	+	0	0	0	0

*Gram negative intracellular diplococci were found on previous infection.

A modification of Grimberg's technique was used. A series of fourteen cases was carefully studied, these patients previously having had treatment for gonorrhea and been discharged upon consecutive negative smears and culture. The method in detail was as follows: liquor seminalis was obtained by gentle stripping of the seminal vesicles and the material obtained (which necessarily contained a small portion of prostatic secretion) was placed in sterile test tubes. These tubes were placed in the incubator for one-half to one hour at 37 C., which tends to liquify the liquor seminalis. Suitable specimens of liquified seminal fluid were then seeded into tubes of ascitic agar.[2] Incubation was maintained at 37 C. for 24-36 hours and the portion of the culture just beneath the surface examined. The cultural findings are listed in Table 1.

As observed, gonococci were isolated in only five of fourteen cases of chronic urethritis, and then only after repeated trial. The gonococci isolated fulfilled all standard morphological and cultural requirements. The secondary invading organisms are listed: they were, in many instances, peculiar in their cultural reactions. Occasional pleomorphism was observed, but reversion to basic strain was obtained on cultural transplants. A large number of the staphylococcus colonies showed wide zones of hemolysis upon blood agar plates: this peculiarity was transitory. Their cultural characteristics were studied in some detail, and the results obtained agreed with those obtained by Julianelle[3].

2. This medium consists of dibasic acid sodium phosphate agar; in the melted state diluted with sufficient ascitic fluid to make agar concentration about .25 per cent, a semi-gel.

SUMMARY

Cultures were made on fourteen cases of chronic urethritis, which had previously been treated for acute gonorrhea, determined by the presence of Gram negative intracellular diplococci. In only five instances, or 35.5 per cent, were positive cultures of the gonococcus obtained from these cases of chronic urethritis, and only upon repeated trial in most instances. Secondary invading organisms, the staphylococcus group, were isolated in all cultures.

4456-58 W. Madison Street.

3. Jour. Inf. Dis., 1922, 31, p. 256.

RHEUMATISM SERIOUS AND DEFINITE DISEASE

Rheumatism is a definite and serious disease, not to be confused with neuritis, muscular pains, or other diseases that are accompanied by inflamation of the joints. It occurs at all ages, but most often early in life. It is not certain that climatic conditions affect it.

The symptoms are intense pain and swelling in the joints, usually with high fever, hence the name, rheumatic fever." The fever is accompanied by weakness, loss of appetite and the other usual manifestations.

Rheumatism is serious on account of the many complications, states Dr. George Dock in the April Hygeia, popular health magazine published by the Americal Medical Association. The most serious of these complications is the inflammation of the lining of the heart and blood vessels, which may lead to chronic heart trouble and hardening of the blood vessels. Severe anemia may be another result of rheumatic fever.

Not much is known about the cause, though there is a theory that it may be due to a germ. The treatment consists mainly in having the patient as comfortable as possible and resting. A light diet with a large amount of water and fruit juices is advised. Heat and oil of wintergreen are helpful. The affected joints should be supported in bandages and splints.

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COUNTY POOR PRACTICE

For the convenience and information of the readers of the Journal, we are abstracting a part of the County Government in Iowa relating to the poor. This will be found in Volume IV, Applied History of Iowa.

Liability for Care of the Poor

For the medical care of a county charge the principles set forth in the preceding observations apply. A board of supervisors is not governed by any fee bill except as a guide in authorizing medical services for a sick county charge. A member of the board of supervisors, or even a majority of the board of supervisors, have no authority to authorize medical services except at a regular business meeting. There are certain emergency cases that in the interest of humanity, the board of supervisors would be warranted in authorizing medical services not previously contracted for, but only on the terms generally authorized for the care of such cases. A physician who is not authorized by the board of supervisors to render certain services at a regular meeting has no claim against the county. Boards of supervisors are generally inclined to be as generous as the law permits, but the only legal claim that the doctor has is based on what the board of supervisors may be generous enough to grant. To commence legal proceedings against a county for certain fees has no standing in court unless such fees have been authorized by the board of supervisors at a regular business meeting.

Each county in Iowa is liable for the care of the poor who have a legal settlement in that county. Since a county's responsibility for giving relief depends upon the residence of the applicant, the methods of securing a legal settlement are important. In Iowa any person who has attained his majority may obtain a settlement by residing in a county one year without being warned to depart. A married woman has the settlement of her husband, if he has one in the state. A woman abandoned by her husband may acquire a settlement as if unmarried. Legitimate minor children have the settlement of their father, if there is one, if not, then that of the mother. Illegitimate children take the settlement of their mother, or if she has none, then that of their putative father. A minor whose parent has no settlement in the state gains a settlement by residing one year in any county.

Persons coming into the state or moving from one county to another who are or are likely to become public charges are prevented from acquiring a settlement if the authorities of the county, township, or city in which such persons are found warn them to depart. After such warning, persons cannot acquire a settlement except by residence of one year without further warning. By repeating the warning before a year has passed, it is possible to prevent indefinitely the securing of a settlement.

The Contract Method

The contract method of caring for the poor was introduced into the Northwest Territory in 1795 and its adoption in the Middle West was practically universal. It was used in the Territory of Wisconsin from which it came into the Iowa territory.

The present law empowers the board of supervisors to make contracts with the lowest responsible bidder for furnishing any or all supplies, medical and dental attendance or services required for the poor, for a term not exceeding one year, or it may enter into a contract with the lowest responsible bidder, through proposals opened and examined at a regular session of the board, for the support of any or all the poor of the county for one year at a time, and may make all requisite orders to that effect, and shall require all such contractors to give bonds in such sums as it believes to be sufficient to secure the faithful performance of the same.

If this method is used the supervisors are required to appoint some person to examine and

report upon the way the contractor is performing his functions. If the poor are not properly taken care of, the board may set aside the contract. Subject to the control of the supervisors the contractor can employ the poor in any work that they are physically able to perform. In the early years of the state the contract method predominated and was applied both to adult paupers and to dependent children. As the state grew the contract system failed to answer the conditions in Iowa and the two other methods—county poor farms and relief in the homes of the poor—came into favor and gradually took the place of the contract plan.

CARE OF THE POOR IN COUNTY HOMES

The second method of caring for the poor is placing them in county homes. This form of poor relief was first provided for in Iowa in 1842 upon the adoption of laws borrowed from Ohio. At times it has been only a secondary method of caring for the poor; at other times legislators have felt that all relief should be given in county homes. The idea of the present Iowa poor law is that all poor should be cared for in county homes except in the special cases for which the law provides outdoor relief. Prior to 1909 the official designation of the county home was the county poor house.

Once in operation the control of the home is in the hands of the supervisors. They, or any committee appointed by them, may make all necessary purchases or contracts and prescribe the rules and regulations for its management and government. In January of each year, they must publish in the official county paper a financial statement including the receipts and expenditures of the county home or farm, an inventory of the property on hand, and a comparison with the inventory of the preceding year. A steward for the home may be appointed by the supervisors to take charge of the institution and run it in accordance with their directions.

More money was spent by Iowa counties in 1921 for medical care of the poor than for any other item except provisions. Many counties have no definite arrangements and whenever the county must arrange for medical care the relief official calls any doctor he chooses. The doctor then presents his bill to the board of supervisors for approval. This arrangement usually gives the patient some choice of physicians and passes the work around, but county officials working under such conditions sometimes complain of the size of the bills submitted by a few of the doctors. Counties do not usually pay the same rate for medical services that is paid by private parties. The county has an agreement in some instances with the county medical society as to what prices its members will charge for county work.

Quite often the board of supervisors enters into a contract with one physician, or with several physicians in different parts of the county, to care for county charges at an agreed annual payment. Such contracts are usually awarded to the lowest bidder so there is no guarantee that good men will be secured. Frequently very good men are named but at other times the job is awarded to men who need the money but are not particularly interested in performing their duties. The result may be that, since the doctor is guaranteed a certain amount, he will neglect to give the careful attention to calls that should be given.

A variation of the contract plan is found in one county where a contract to care for all the sick poor has been entered into with a clinic composed of ten doctors. This arrangement is only for the county seat but it gives the overseer of the poor a number of available specialists and has proven to be quite satisfactory. Eight hundred dollars a year is the contract price.

The most recent plan worked out in the state and one that promises much is a contract with the county medical society instead of any one person or limited group. As worked in one county, the plan provides that the medical society receive $2500 a year for the care of the sick poor. Any poor person desiring medical aid at county expense must first secure the approval of the overseer of the poor who is a trained social worker. The overseer, after approving an appeal, calls whatever physician the patient chooses. Any member of the medical society may be summoned. The cost of all medicines and supplies furnished the poor is first paid out of the $2500 by the society and the remainder is distributed among the members on the basis of the number of calls made by each. The amount per call received by each member for the past year was $1.20. The plan has been in operation four or five years in this country and all concerned report it to be a very satisfactory arrangement.

Hospital care is not included in any of the above arrangements and must be provided separately. A limited number of counties have their own hospitals. Others pay a specified sum each year to some private hospital which in return must provide hospital facilities for all county charges. Still others make arrangements with private hospitals as each case arises, but frequently have agreements whereby the county gets special rates.

THE SHEPPARD-TOWNER ACT

The Sheppard-Towner Act has been the subject of much discussion. It was designated as an act for the promotion of the welfare and hygiene of maternity and infancy, and for other purposes. Approved November 3, 1921. Exactly six months after the approval of this act the House of Delegates of the American Medical Association adopted a resolution condemning it as a "type of undesirable legislation which should be discouraged". The act itself authorized appropriations to carry it into effect until June 30, 1927. The House of Representatives has authorized appropriations for two additional years and in the Senate the Committees on Education and Labor have recommended the passage of the House Bill but recommend that the period of the proposed extension be reduced from two years to one and that a definite date for the discontinuance of aid under the Sheppard-Towner Act be now fixed. The conditions of the Sheppard-Towner Act required that the act should be accepted by the individual states by appropriating certain sums of money to match the sum assigned from the general appropriation with an equal amount of money. Several of the states declined to accept the proffered subsidy and submit to federal supervision and control. Connecticut, Illinois, Kansas, Maine and Massachusetts have steadfastly refused to do so.

Proposed Extension of the Sheppard-Towner Act

"Some of the proponents of the Sheppard-Towner Act now contend that the act is permanent legislation." "Up to the time of their recent declarations, however, it had been commonly believed that the act was temporary, limited by its own express provisions that authorized appropriations only until the fiscal year ending June 30, 1927. 'That view seems to be borne out by the now admitted necessity for specific legislative authority for any appropriation to continue operations under the act after the period stated; for if the act is permanent in character, new legislation should not be needed to enable Congress to make appropriations to carry it into effect.' "

The Senate Committee on Education and Labor recommended that the bill passed by the House be enacted, but only after amendment reducing extension of the act two years to one.

This act has been generally opposed by the medical profession but on account of the activity of welfare agencies, legislative enactments have been rather favorable to the Sheppard-Towner Act.

For a full discussion of this subject the reader is referred to the American Medical Association Bulletin for May, 1926, page 126.

PROGRESS OF STATE SOCIETY JOURNALS

We are taking from the Journal of the American Medical Association the following observations made as to progress of state journals. The Journal of the A. M. A. has been a close observer of the journals published by the different State Medical Societies and what the Journal says is worth reading.

In 1913, at the suggestion of the editors of several state medical journals, the work of the co-operative advertising bureau was begun. The cost of operating medical periodicals was proving almost prohibitive in some states. Others, in order to avoid financial loss, were being forced to accept advertising from the makers of doubtful preparations. At that time, many of the state journals were poorly printed on poor paper. Some were small, some large. A collection of them displayed not even the two-by-two uniformity of the passengers in Noah's Ark. It seemed to these editors that a central advertising bureau, located at the headquarters of the American Medical Association, could obtain advertising business not for one, but for many journals. In this way, soliciting expense would be spared to the journals and greater circulation obtained for the advertisers. Furthermore, the close association of such a bureau with the Council on Pharmacy and Chemistry would result in printing only the advertising of manufacturers of ethical products, rather than that of any applicant who could pay for space. This year virtually marks the completion of the program set in operation in 1913. Thirty state journals are now members of the cooperative advertising bureau. Only one is not a member of it. These thirty journals are now appearing with a uniform six by nine inch type size of page. Many of them, with the current year, are adopting more attractive covers. All are being printed on good paper. One can turn the pages of almost all of them and never see an advertisement of which an ethical journal would be ashamed. They are solvent and unafraid. The efforts of the state societies' editors and managers since 1913 have had much to do with bringing about this better state of affairs. At the same time, a great deal of credit belongs to those who conceived the idea of the cooperative advertising bureau and to those who have directed its activities, whereby more and better business has been obtained at half the cost of the

same volume of advertising if it were obtained through individual solicitors."

THE PROBLEMS OF AN EDITOR

Discussed by the Retiring Editor of the West Virginia Medical Journal

(1) "There have been many criticisms of the policies of the editor." This is one of the drawbacks of the office, and it is surprising the many who, having had no training in journalistic work, have no hesitancy in advising an editor how his columns may be improved. On the other hand, much may be done by change of type and make-up, and by more careful editing of the material used in a journal, to enhance its literary value; yet apparently only a very small percentage of the readers will recognize the improvement. It seems to be a case where "silence gives consent".

(2) "We have been criticized for our pages dealing with the state and general news because they were more or less of a 'family' nature." Many readers of the Atlantic, however, state that the pages containing these items are the first they turn to every month. We consider this a valuable part of a state journal, providing it is not made too provincial, and is properly edited. Not infrequently, material of this nature that is published in some state journals would seem to belong more properly to the county-society bulletins—if the latter exist in the states under discussion.

(3) The West Virginia Journal has been "criticized because there were not more editorials of a scientific nature". Occasionally this complaint comes to the editor of the Atlantic, but only from some one who is well read in medical literature. The editorial pages of a state journal should, in the main, be used to convey messages to the general practitioner, who constitutes the largest percentage of its readers. Highly scientific editorials should be run from time to time, but not too frequently.

(4) It is of interest to note that "the editor has had very little help from the membership in the way of material for the Journal". This is a universal complaint of all the state medical journals. With the execption of the county-society reports, book reviews, occasionally editorials, a few stray new items and the state society secretary's department, the journal work must be done entirely by the personnel of the office of publication. The readers should realize that it is their own journal, and that their cooperation can make it of vastly more interest not only to others, but also to themselves.—The Atlantic Medical Journal.

DEDICATION OF THE BEAUMONT MEMORIAL

On June 29, 1926, the medical profession of Lebanon, Connecticut, dedicated a Beaumont Memorial Boulder to the memory of Dr. William Beaumont, surgeon in the United States Army who made the historic observations upon stomach digestion in the person of Alexis St. Martin. Dr. Beaumont was born on a farm near Lebanon, Connecticut, November 21, 1785, studied medicine with Dr. Seth Pomeroy of Champlain, New York, and Dr. Benjamin Chandler of St. Albans, Vermont. He secured a license to practice from the Vermont State Medical Society, and on December 2, 1812 enlisted as surgeons' mate in the Sixteenth Regiment, United States Army, and served faithfully during the war with England in 1812.

On June 2, 1822, occurred the accident to Alexis St. Martin which gave Dr. Beaumont the opportunity to make his experiments on stomach digestion.

Feeling that Dr. William Beaumont was entitled to a high place in medical history, the Lebanon Medical Club arranged for the dedication of a large boulder from the Beaumont farm bearing the following legend:

Dr. William Beaumont, a surgeon in the United States Army, who later became illustrious as a pioneer investigator of the physiology of digestion through his painstaking and valuable observations continued throughout many years and largely at his own cost upon the person of Alexis St. Martin, who recovered under the skillful treatment of Dr. Beaumont, from a severe gunshot wound of the abdomen which healed with a permanent gastric fistula.

"In appreciation of his valuable services to science and to humanity this tablet has been placed here by the Beaumont Medical Club."

Professor Lafayette B. Mendel, president of the Beaumont Medical Club presided; Col. D. S. Fairchild, Jr., U. S. A., New Haven, representing the Medical Corps of the Army; Dr. John E. Lane, New Haven, representing the American Medical Association; Dr. W. H. Carmalt, New Haven, representing the Connecticut Medical Association; Professor Ross G. Harrison, representing Yale University, and Dr. Leonard Worlsey Bacon of New Haven, representing the family. After an address by the president of the club, Dr. Mendel, the exercises were closed by an address by Professor Russell H. Chittenden, director emeritus at Sheffield Scientific School, Yale.

AN IMPORTANT DECISION

Judge Herman F. Zeuch of the Municipal Court, Des Moines, in dismissing a suit in a claim of the "Bloodless Institute" held to the effect that the organization of medical and dental corporations is against public policy and does not make the doctors directly responsible to the patients. Judge Zeuch recommended that the attorney general take steps immediately to revoke the charters of nearly 500 such firms in the state and that the secretary of state be instructed to cease the practice of issuing them.

This opinion may not stand a review of the higher courts but it is worth while for the various clinics to submit the form of their organizations to some competent attorney for an opinion.

THE FORD HOSPITAL, DETROIT, MICHIGAN

There has been much criticism of the method employed by Mr. Ford in conducting his hospital. The main criticism was based on placing the medical men on a salary basis and fixing the fees for operations and other professional services at flat rates. The profession could see no reason why the millionaire should be charged the same rate that was charged persons belonging to the middle classes. It was felt that men should pay a fee which corresponded in some degree with their wealth. Recently Mr. Ford has changed this policy and has not undertaken to limit the fees as originally proposed. Originally it was thought that the hospital should be self-supporting but experience has shown that ever since the hospital was established there has been an annual deficit of more than $2,000,000. Everything must be paid for in advance and all fees of whatsoever kind go to the hospital. The average charge was $125 to $150 for the combined hospital and professional fees.

THE AMERICAN JOURNAL OF SURGERY

With the May 1926 number, the American Journal of Surgery passes into the hands of Paul B. Hoeber of New York.

The editor, Walter M. Brickner, M.D., F.A.C.S., announces among other contemplated changes, to accept only such advertisements as measure up to standards set by the Council on Pharmacy and Chemistry and Physical Therapy of the American Medical Association, as soon as existing advertising contracts expire. The editor further announces that the size of the journal will be increased.

OBSERVATIONS ON THE VETERANS BUREAU

We copy from the Indiana State Medical Journal the views presented by a representative of the Veterans Bureau before the House of Delegates of the A. M. A.

A representative of the Veterans Bureau secured permision to talk before the House of Delegates of the A. M. A. at the Dallas session concerning the attitude of the Bureau in caring for veterans of any of the wars whether the disability arose as a result of service or not. He pointed out that the Bureau does not make the law, but is complying with provisions made by Congress. However, as a concrete example of what is expected of the government through the activities of the Veterans Bureau, he cited the case of a soldier who perhaps contracted syphilis after the war, and later turned up with some of the various sequellae which incapacitates him and perhaps makes him a dependent upon the community in which he lives, while the question of how the disability arose is secondary to the known fact that the dependent served his country, and his country expected that he would be taken care of in consequence of that service. The bureau's representative also made a very telling point when he stated that it ill becomes the medical profession to complain about gratuitous medical and surgical services to the veterans of the late war when they themselves are responsible for the most shameful abuse of clinics and charitable institutions in every city and town of the United States by people perfectly able to pay for the services rendered, and who oftentimes are rated as wealthy. In fact, a great many of these surgeons and specialists who hold positions on the staffs of free clinics and charity hospitals lack the nerve to complain about the abuse of the charity rendered because they are afraid that they may lose their positions, or incur the enmity of the uplifters who are interested in furnishing free service to many undeserving people. Laying aside the question of any compensation of any kind whatsoever for the members of the medical profession who are devoting so much of their time to gratuitous work, a great economic factor is deserving of consideration, and that pertains to the pauperizing of a horde of people who do not deserve such classification, and increasing the number of unworthy dependents who receive support at public expense. What applies to our free clinics and charitable hospitals applies equally to the clinics and hospitals maintained by the government, and because a man served in some capacity in any of our wars is no reason why he should be made the subject of undeserved bounty at the hands of the government. Already there is a growing number of able--bodied young men who, for their own good, would be better off if they went to work, and who have become government dependents because it was easy to fall into that classification. We believe that every ex-soldier of the United States who has any

disability that can be traced to service for his country in time of war deserves a pension, and a liberal one, but we are once and for all time opposed to making all the rest of the soldiers dependents and members of the already too large army of shirkers in this country.

FIFTIETH ANNIVERSARY OF JOHNS HOPKINS

The celebration of the fiftieth anniversary of the founding of Johns Hopkins University will take place on October 23, 1926. The chief events of the occasion will be the dedication of the new million dollar building of the School of Hygiene and Public Health; a series of conferences to be addressed by leaders in the social and natural sciences; commemorative excercises, and an alumni banquet. Among the speakers will be: Dr. Andrew Balfour, director of the London School of Hygiene and Tropical Medicine; Proessor Neufeld, director of the Institute of Infectious Diseases, Berlin, who will deliver the De Lamar Memorial Lecture; Prof. Levy-Bruhl of the department of modern philosophy at the Sorbonne; Albert C. Ritchie, governor of Maryland, a Johns Hopkins alumnus; Mayor Howard W. Jackson of Baltimore; Newton D. Baker, former Secretary of War; Prof. Edwin G. Conklin of Princeton University; Dean Gordon J. Laing of the Graduate School of Arts and Literature at the University of Chicago, and others. Dr. Ira Remsen, the only surviving member of the original faculty of the university, will attend the celebration.

TRAVEL STUDY CLUB

The Travel Study Club of American Physicians left for an eight weeks tour of Europe, June 12, to visit Norway, Sweeden, Denmark, Germany, Switzerland, France and England. Ten days will be spent in Germany at Cologne, Dusseldorf, Neuenahr, Wiesbaden, Heidelberg and Baden-Baden, where special receptions and banquets will be given by the Kur-Administrations and their German colleagues. Dr. Louis L. Seaman is president of the club, and Dr. Richard Kovacs, secretary-treasurer.

TEST OF HOSPITAL BEING CHARITABLE INSTITUTION

(Nuns of Third Order of St. Dominic vs. Younkin et al. [Kans.] 235 Pac. R. 869)

The supreme court of Kansas, in reversing a judgment that was rendered for the defendants, and directing that one be entered instead for the plaintiff, in this suit to enjoin county officials from levying and collecting taxes on a hospital owned by the plaintiff, says that the test which determines whether a hospital is charitable is whether it is maintained for gain or profit. If a hospital is conducted for the use and profit of persons engaged in the practice of medicine and surgery, or as an adjunct to a medical college conducted for the profit of its owners, it cannot be regarded as a charitable institution, and is subject to taxation. But when an institution is incorporated for benevolent purposes without capital stock, and no dividends are declared or paid, and it conducts a hospital, and all the earnings of the hospital from pay patients, gifts, devises, bequests or whatever sources are used in the maintenance, extension and improvement of the hospital, which admits patients without regard to race, creed or wealth, it is uniformly held that such hospital is conducted exclusively for charitable purposes. The fact that it charges and receives pay for patients able to pay does not detract from the charitable nature of the service rendered. Nor does the fact that the hospital has been able to increase the value of the plant from money received from pay patients and donations detract from its charitable purposes. If these incomes from pay patients and donations are used for the purpose of caring for or relieving the sick or disabled and increasing the facility of the institution for that purpose, and are not used for the purpose of declaring dividends or the financial profit (other than the paying of necessary operating expenses) of those connected with or having charge of the institution, such use is simply an extended use for charitable purposes—Journal A. M. A.

COFFEE DRINKING BY CHILDREN

Coffee drinking by children has long been regarded with disapproval by pediatricians. There are a number of objections to the practice, among which its harm to the nervous system is important. It is entirely conceivable that the use of caffein-containing beverages by the child will lead to the production of serious nervous defects later in life.

In their recent book, "Safeguarding Children's Nerves" (1924), Doctors Walsh and Foote clearly indicate that there is an increasing nervous instability of American people as demonstrated by the failure of many of our troops to withstand the stress and strain of active service. These writers believe that the numerous cases of shellshock which were suffered by many American soldiers in the World War were nothing more than cases of hysteria. It is possible that the early use of coffee has had a contributing part in causing the lack of nervous balance that is exhibited by so many adults in this country.

The drinking of coffee in the United States is steadily increasing, and the average annual consumption now amounts to thirteen pounds or more per capita. No small portion of this coffee is used by children, as shown by a study of the diet of a large number of children of preschool age at Gary, Indiana. This survey was made by the Children's Bureau of the United States Department of Labor. The report mentions that "two-thirds of the entire

group were found to drink coffee habitually, and forty per cent to have it more than once a day. Not only so, but in certain of the groups of foreign-born parentage, coffee was drunk by more than ninety per cent of the children, and three-fourths of the Polish group had it two or more times a day."

In 1912, C. K. Taylor, a psychologist, made a study of coffee drinking by school children. He found that out of a group of 464 children, over seventy per cent of them were coffee drinkers. Moreover, and more important still, he discovered that those children who drank the most coffee received the lowest grades. There is no doubt but that coffee drinking by children is generally deleterious to the nervous system of the child. But the greatest harm done to children by this drink is its replacing milk in the diet. The Gary report, referred to above, states that coffee drinking by children "apears to have been inversely proportional to the use of milk. Not only do the schedules show about the same percentage of children drinking coffee as those lacking milk, but a comparison of coffee drinking by milk groups shows the use of coffee to increase markedly as the amount of milk decreases." Commenting upon the disastrous effect of replacing milk by coffee, the report states further: "To leave out milk and substitute coffee plays havoc with any diet, whatever may be its redeeming features."

It is a well known fact that children easily acquire a taste for coffee and are less willing to drink milk after being permitted to use coffee. Miss Lucy H. Gillett, superintendent of the nutrition bureau of the New York Association of Improving the Poor, says in this connection that "children should never be given tea or coffee, not even to flavor milk. They will more often like milk if they are not first taught the combination of milk and coffee."

There are two important reasons why coffee should not be given to children. First, it has the harmful effect of crowding milk out of the dietary of the child. Second, it is an undesirable and unneeded stimulant.

In view of the fact that a large number of American children, especially in the industrial classes, are coffee drinkers, the matter is worthy of serious consideration.

ASPIRIN RULING FOR IOWA

On account of the complaints against the promiscuous selling of Aspirin in pool halls, cigar stores, restaurants, etc., having become so numerous, the board of pharmacy feels that the sales should be restricted to licensed pharmacists and physicians. In view of this fact the state board of pharmacy has published the following information taken from Section 2580, Code of Iowa, 1924, and Section 2578:

"For the purpose of this title the following classes of persons shall be deemed to be engaged in the practice of pharmacy:

"1. Persons who engage in the business of selling, or offering or exposing for sale, drugs and medicines at retail.

"2. Persons who compound or dispense drugs and medicines or fill the prescriptions of licensed physicians and surgeons, dentists or veterinarians."

—Northwestern Druggist.

ST. BARTHOLOMEW'S HOSPITAL

From a letter by Dr. Charles Greene Cumston of the Boston Medical and Surgical Journal, we give a few points in relation to the founding of the famous St. Bartholomew Hospital, which may be of interest.

"During the week beginning June 5, the oldest and one of London's most famous hospitals celebrated its eight hundredth anniversary by a festival of great historic interest. Rahere, the founder of St. Bartholomew's hospital, rises up before us in the 'liber Fundacianis' in his habit as he lived, and 'Brother John Cok', who copied it and translated it into racy English 'in the evening of his life, Anno Domini, 1468, on whose soul may God have mercy', paints himself as well as his hero of three centuries before. He tells how he himself was born in Woodstreet, how he was apprenticed 'in the first year of King Henry V', and how 'on a very rainy day' he beheld the coronation of the sovereign and has 'recorded for the refreshing of memory'.

"Rahere, like his patron, St. Bartholomew, was given in his youth to vain pleasures, as the 'liber' records. He haunted the houses of noble men and the palaces of princes, 'where under every elbow of them he spread their cushions and by japes and flatterings delectably annointing their ears, by this manner to draw to him their friendships.' But all this 'jolite and carnal suavyte' was soon to end.

"It has been surmised that the loss of the 'White Ship' and the drowning of the King's eldest son were the occasion of his turning to serious affairs of life. He made a pilgrimage to Rome, contracted Roman fever, vowed a vow, and on his way home had that vision of St. Bartholomew which was likewise to bear fruit enduring to the present time.

"It is tempting to ascribe his design to influences far older. The Saxon King Ina had established an Anglo-Saxon 'schola' by the Tiber early in the eighth century; towards its close Offa enlarged this foundation, transformed it into the 'xenodochium quod Sanctus Spiritus dicitur', and endowed it with 'St. Peter's Pence'. Hence, the most venerable hospital in the world, the Santo Spirito, whose visiting book is the most wonderful of all autograph collections, is of English origin. Over against it on the island of the Tiber the Emperor Otho III built the church in which, by a tradition much earlier than Rahere, there rests the body of St. Bartholomew. It is probable that Rahere visited it and by a curious coincidence the ruins out of which it was built were those of a temple, 'Jovis et Aesculapii'.

"Rahere fulfilled his vow, and obeyed the vision, for he built both the hospital and church where he rests in the habit of the Augustinian Canons Regular."

THE WILLIAM BEAUMONT MEMORIAL FUND

To encourage investigations of alimentary tract function, Dr. Frank Smithies, Chicago, has presented to the School of Medicine of The University of Illinois, bonds in amount sufficient to yield annually, in perpetuity, not less than $100.00. This fund is known as "The William Beaumont Memorial Fund" and the income therefrom, as "The Annual Beaumont Memorial Award."

The award is to be made each year to the research or clinical investigator, who, in the judgment of a faculty committee, has contributed the most important work during the year, in the field designated.

The first award will be made in 1927. Manuscripts covering investigations do not have to be entered specifically for the award nor is it required that they be submitted to the faculty committee. The award is to be granted by the committee after it has considered carefully all investigations published during any year in periodicals throughout the United States. Thus, the award is available to workers in any institution, and is not confined to members of either faculty or student body of the University of Illinois.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the folowing open competitive examination:

Medical Officers

Application for medical officer positions will be rated as received at Washington, D. C., until December 30. The examinations are to fill vacancies in the Indian Service, the Public Health Service, the Coast and Geodetic Survey, the Panama Canal Service, the Veterans' Bureau, and other branches.

The examinations are of five grades; Junior medical officer, assistant medical officer, associate medical officer, medical officer, and senior medical officer.

For the Department Service at Washington, the entrance salaries range from $1,860 a year for the junior grade to $5,200 a year for the senior grade. Juniors may be promoted to $2,400 and seniors may be promoted to $6,000 after the six months' period of probation. Higher-salaried positions may be filled through promotion in accordance with the civil service rules. Promotion from grade to grade may also be made in accordance with the civil service rules as vacancies occur. For field branches the salaries are approximately the same except that deductions are made where quarters and subsistence are furnished and where part-time duty, only, is required.

Eligibles are needed who are qualified in general medicine and surgery. There is especial need for eligibles qualified in the various specialties. Practically any specialty may be named by the applicant.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the post office or customhouse in any city.

TUBERCULOSIS IN PORTO RICO

The laboring classes in Porto Rico suffer greatly from tuberculosis, says Dr. J. G. Townsend, of the U. S. Public Health Service, who recently returned to the United States after five months of study of the tuberculosis situation in the island. The tuberculosis death rate is a little more than 200 per hundred thousand. This is greater than that of any state in the union except Colorado, where the tuberculosis death rate is, of course enormously increased by the constant immigration of tuberculosis patients, for whom there is no longer any hope. In Porto Rico, moreover, the tuberculosis death rate of the well-to-do classes is very much lower than that of the laboring classes. In the industrial cities on the practically level coast belt it averages about 8 per cent of the total death rate; in the mountainous central portion it is less, averaging about 4 per cent, except in certain industrial towns, especially those dependent on the tobacco industry. The death rate for industrial women is higher than that for men. This condition is the exact oposite of that in the United States, and is supposed to be due to the fact that in Porto Rico industrial women are also wives, mothers, and housekeepers.

These high rates, are not due to the climate, which is both delightful and healthful, but to the conditions under which the poorer classes live. A survey of more than a thousand houses occupied by the laboring classes in seven of the larger cities on the island reveals that practically all of them consist of two rooms, and shelter an average of six persons. Each room has an average floor space of less than a hundred square feet; and the total air space is considerably less than a hundred square feet: As the one window and the door are kept closed all night long to keep out the greatly dreaded "night air", this 10,000 cubic feet has to suffice for three persons for about eight hours. As Rosenau estimates that to keep healthy a man weighing about 160 pounds requires about 2,400 cubic feet of fresh air, renewed every hour, the state of air in these rooms after being occupied all night by three persons may be imagined. Such conditions are, of course, ideal for the transmission of tuberculosis.

The usual diet of the people for the most part is also ideal for the propagation of the disease. Black coffee, rice and beans in great quantities, and sometimes bananas, oranges, and plantains complete the list.

Both the housing and the diet are due chiefly to the prevailing economic conditions. A wage of thirty cents to one dollar per day (generally fifty cents) makes it impossible for the laborer to support his family, to furnish habitable homes, and to purchase adequate food. Employers say that the average laborer does not do enough work to entitle him to higher wages; and this may be admitted. But the laborer cannot do better work, because he suffers not only from tuberculosis, but also from hookworm and malnutrition. He cannot afford to do what his doctors advise, and in consequence he cannot give his employer better labor. This vicious circle can be broken, but it has not yet been.

A comparative check by name of all the reported cases and reported deaths from tuberculosis in Porto Rico during the last 2 and one-half years showed that sixty per cent of the tuberculosis deaths were never reported as cases. In other words, more than one-half of the death reports supplied the first official intimation that the patient had been ill at all. The illness is probably concealed as long as possible, sometimes until death, and in many of the reported cases until the patient was in a moribund state.

Most Porto Rico cities employ physicians who hold clinics for patients at convenient places and who later visit patients who are unable to come in person. More of these clinics are recommended. Other recommendations are for the establishment of social work, the supplying of free sputum cups, better reporting of cases, increased hospital accommodations, education of children along health lines, and the working out of a wage scale that will give the laborer a chance to preserve his own life and the lives of his family.

The great mass of the workers of the island are employed in the sugar, tobacco, fruit raising, and coffee industries.

SURVEY OF THE WORK IN STATES FUNCTIONING UNDER THE SHEPPARD-TOWNER ACT

The Medical Woman's Journal is securing and will present to its readers definite data concerning the work being done in the several states of this country under the provisions of the Sheppard-Towner Act. The first articles of the series will be found in this month's number.

Probably no other act occasioned so much discussion as this particular one, and its passage brought forth many comments both favorable and adverse, with dire predictions as to the results as well as enthusiastic commendation. As it is a subject in which women are interested, especially medical women, the editors felt it was incumbent upon the journal to present to its readers definite and authentic information from those who have been carrying out the provisions of this act.

Forty-four states out of the forty-nine comprising the United States accepted the provisions of the act and are proceeding with a definite program under it. The problems presented under it are not always similar; what is a major problem in one state may only require passing attention in another. The conditions existing in such localities as different parts of Georgia and Alabama, the mountains of Tennessee and Kentucky, the plains of the western states, the fertile valleys of Ohio and the densely populated districts of New York and New Jersey, constitute different situations which must be adequately met in order that the act, which was conceived as a measure of assistance to the children of the country, might fulfill its purpose.

This we believe to be the first comprehensive survey of the workings of the Sheppard-Towner act that has been undertaken, and the articles are contributed by those who are in actual charge of the work. We have been gratified by the enthusiastic response received to our request for reports from each state. Such reports will be embodied in the series of articles and cannot fail to be of value to workers all over the country who are frequently so engrossed with their own methods of carrying on local infant and child welfare work, that they fail to take the necessary time to acquaint themselves with what is being done elsewhere.

This is another instance of the service of the journal is continually rendering to medical women and serves to illustrate the value of having a monthly publication devoted exclusively to their interests and appearing sufficiently often to keep them in step with progress.—Medical Woman's Journal.

VILLAGE DOCTORS MORE NUMEROUS BUT HARDER WORKED THAN CITY COLLEAGUES

Village communities have only about two-thirds as many physicians in proportion to the number of inhabitants as have medium-sized cities, acording to figures just made public by the Institute of Social and Religious Research, New York, in a report, "American Villagers," by Dr. C. Luther Fry, in which are presented the results of an interpretative study of previously unpublished 1920 census data for 177 agricultural villages selected to be as near representative as possible of the entire United States.

But the villages themselves, as distinguished from the "village communities", have proportionately more physicians than the cities have. The Institute's computations for the different regions show that per 1,000 inhabitants the middle Atlantic villages have 2.9 physicians and the cities 1.6, the middle west villages 2.8 physicians and the cities 2.2, and the southern villages 3.6 and the cities 2.1, while the far west villages have 2.8 physicians and the cities 2 per thousand inhabitants.

"Of course, the large villages have more physicians than the small centers have," says the report, "but the increase does not keep pace with growth of village population, with the result that the proportionate number of doctors decreases as the villages become larger.

"These figures do not mean, however, that villages have a larger number of doctors in proportion to the population they serve. It is a known fact that village physicians serve open-country inhabitants as well as villagers. The first-hand studies of the Institute's field workers found that almost no doctors live in the open-country areas adjacent to villages. Open-country inhabitants are therefore conpelled to turn to villages when they want medical attention.

"In every region the cities have from one-third more to nearly twice as many doctors as have 'village communities'. These differences are all the more significant because the distance a village doctor must travel in visiting many of his rural patients makes it difficult for him to care for as many people as can a city doctor.

"The professional functions rendered by villages steadily expand with the increasing size of the village. The only professional persons in very small villages are, with few exceptions, the teacher, the doctor and the clergyman. As the village grows larger the lawyer and the dentist enter. Further increases in size bring the musician and the veterinary surgeon, while last of all comes the trained nurse." —Institute of Social and Religious Research.

ANTITOXIN UP TO DATE

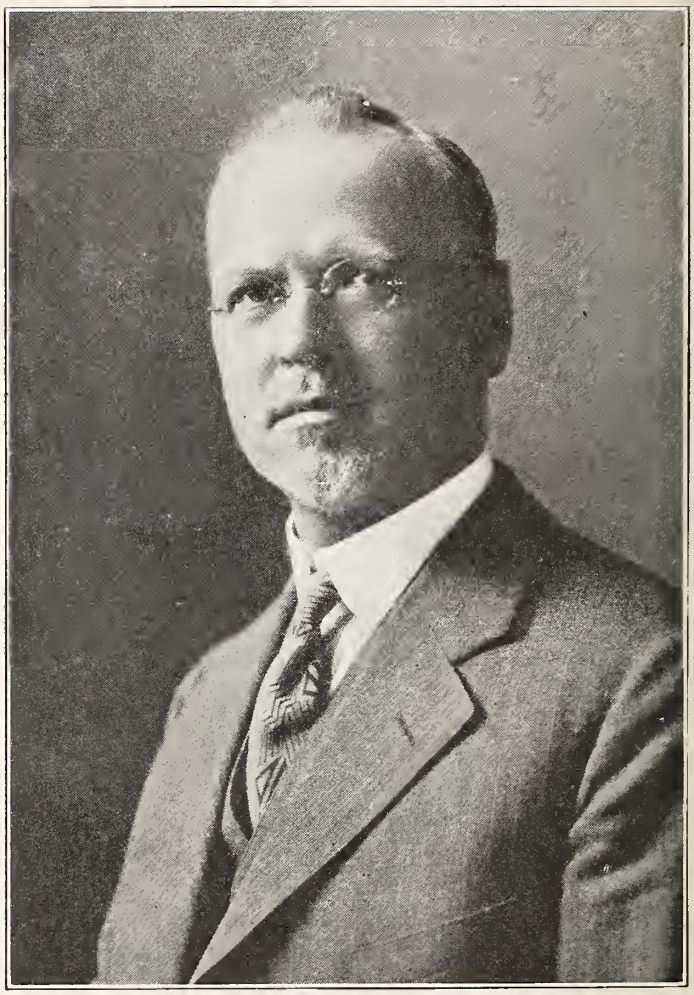
Ever since the discovery of diphtheria antitoxin, biological manufacturers have been endeavoring to overcome certain difficulties associated with its use. One of these, the bulk of the effective dose, has been disposed of by elimination of the water and other non-essential elements, until a product approaching a state of absolute purity has resulted. The best antitoxin, while small in bulk, is sufficiently fluid to ensure prompt absorption and consequently prompt therapeutic effect.

Another difficulty has been that the rubber of the plunger in the syringe packages in which all antitoxins are supplied is very apt to become adherent to the glass barrel of the syringe, and physicians have had no end of trouble in trying to break the adhesions without breaking the springe.

Parke, Davis & Co., as will be noted by reference to their advertisement elsewhere in this issue, offer not only a highly concentrated antitoxin with low protein content, but an "improved" syringe package. We understand that the improvement consists principally in an ingenious reduction of the area of contact surface between the plunger and the syringe barrel, so that by giving the piston rod a gentle turn the plunger can be rotated and then, of course, moved forward under steady pressure.

DR. HENRY ALBERT APPOINTED COMMISSIONER OF HEALTH

Dr. Henry Albert, formerly professor of pathology at the Iowa State University and recently director of State Hygienic Laboratories at the University of Nevada, has been appointed by the governor as commissioner of health to fill the vacancy left by the resignation of Dr. Don M. Griswold. The profession of Iowa will welcome Dr. Henry Albert back to the state from which he has been absent for sev-



DR. HENRY ALBERT

eral years. He was obliged to seek a milder climate on account of impaired health and was granted a leave of absence from the university. Dr. Albert has been an active member of the Iowa State Medical Society and a frequent contributor to its programs. Previous to his leave of absence he was a contributor to the State Medical Journal, a helpful service which we hope he will resume.

Dr. Albert is so well known to the older members of the Iowa profession that no introduction is necessary, but on account of his official position we feel that we should give a short outline of his work for the benefit of the younger men. Dr. Albert received the degrees of B.S., M.S., M.D., from the State University of Iowa, the latter degree was awarded

in 1902. From 1903 until 1920 he occupied the chair of pathology and bacteriology at the State University. In 1904 he was appointed director of the Iowa State Board of Health Laboratories, a position he held until 1920. In 1920 he was granted a leave of absence from university work and spent the following year in California regaining his health. In 1921 he was appointed director of the State Hygienic Laboratories, University of Nevada, at Reno, where he remained until his recent appointment. Although absent from the state, Dr. Albert has maintained his citizenship in Iowa and he returns to assume the duties of health commissioner, a position for which he is particularly well qualified by reason of his wide experience and intimate knowledge of Iowa health conditions. Dr. Albert has been an active member of the American Public Health Association for many years and has contributed a great many valuable articles on infectious diseases during this time.

The Journal, on behalf of the physicians of the state, extends to Dr. Albert a most cordial welcome back to Iowa.

ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE MISSOURI VALLEY

The thirty-ninth annual meeting of the Medical Society of the Missouri Valley will be held at Omaha and Council Bluffs, Wednesday, Thursday and Friday, September 15, 16 and 17, 1926.

Meeting place: New Medical Arts building, Omaha.

Headquarters: Hotel Fontenelle.

PROGRAM

Wednesday, September 15

9:00 O'clock—Executive Session

9:30 O'clock

1. Some Problems in the Care of the New Born—Fred Moore, M.D., Des Moines, Iowa.
2. Acidosis and Alkalosis—McKim Marriott, M.D., Professor of Pediatrics and Dean of Washington University College of Medicine, St. Louis, Missouri.
3. Diseases of the Gall-Bladder—Harry Dahl, M.D., (Formerly of Rockefeller Institute, New York), Des Moines, Iowa.
4. The X-Ray Visualization of the Gall-Bladder: A Method of Determining Gall-Bladder Disease and Function—E. H. Skinner, M.D. and Ira H. Lockwood, M.D., Kansas City, Missouri.
5. The 1925 Epidemic of Poliomyelitis in Omaha—B. C. Russum, M.D., of the Department of Pathology, Creighton University College of Medicine, Omaha, Nebraska.
6. The Leucocyte Count as a Diagnosis and Prognostic Aid in Appendicitis—M. Pinson Neal, M.D., Professor of Pathology, University of Missouri College of Medicine, Columbia, Missouri.

2:00 O'clock—Afternoon Session

7. Clinic—Demonstration of Pediatric Cases of General Interest—McKim Marriott, M.D., Professor of Pediatrics, Washington University College of Medicine, St. Louis, Missouri.
8. Influence of Diet on the Treatment of Cardiac Failure—F. A. Smith, M.D., Professor and Head of Department of Theory and Practice of Medicine, University of Iowa College of Medicine, Iowa City, Iowa.

A. D. DUNN, M.D., Omaha
President Medical Society of the Missouri Valley

9. Clinical Interpretation of Some Unusual Sugar Tolerance Responses—J. D. Boyd, M.D., Instructor in Pediatrics, University of Iowa College of Medicine, Iowa City, Iowa.
10. Report of Reconstruction Work of the Upper Extremities—A Steindler, M.D., Professor and Head of the Department of Orthopedics, University of Iowa College of Medicine, Iowa City, Iowa.
11. Conservative Treatment of Eclampsia—E. D. Plass, M.D., Professor and Head of Department of Gynecology and Obstetrics, Iowa City, Iowa.

8:00 O'clock—Evening Session

12. Experiments in Focal Infection and Elective Localization—Resume, Newer Findings and Clinical Application—E. C. Rosenow, M.D., Professor of Experimental Bacteriology, The Mayo Foundation of the University of Minnesota, Rochester, Minnesota.
13. Experimental Evidence for the Relation of Dental Infection to Systemic Disease—Russell

Haden, M.D., Professor of Experimental Medicine, University of Kansas, Kansas City, Kansas.

Smoker

Thursday, September 16

9:00 O'clock—Morning Session
Council Bluffs Clinic

(Transportation to and from Council Bluffs furnished by the Omaha-Council Bluffs Medical Profession.)

COUNCIL BLUFFS CLINIC
Where the Clinics will be held on Thursday morning

14. Clinic—Orthopedics—Karl Werndorf, M.D., of the Council Bluffs Clinic (Formerly Professor of Orthopedic Surgery, University of Vienna, Austria), Council Bluffs, Iowa.

15. The Management of the Senile Prostate—Nathaniel G. Alcock, M.D., Professor of Genito-Urinary Surgery, University of Iowa College of Medicine, Iowa City, Iowa.

16. Surgical Problems of the Upper Abdomen—G. G. Cottam, M.D., Sioux Falls, South Dakota.

2:00 O'clock—Afternoon Session

17. Clinic—Demonstration of Dermatological Cases—W. A. Pusey, M.D., Professor Emeritus of Dermatology, University of Illinois, Chicago, Illinois.

18. How Far Has the Newer Work on Bright's Disease Helped Us in Diagnosis and Treatment?—Hilding Berglund, M.D., Professor of Medicine, University of Minnesota College of Medicine, Minneapolis, Minnesota.

19. Anatomy of Trigeminal Nerve from the Standpoint of Alcoholic Injection—Thomas L. Houlton, M.D. and H. N. Boyne, M.D., of the Department of Anatomy, Creighton University College of Medicine, Omaha, Nebraska.

20. A Hitherto Overlooked Source of Uric Acid, and Its Relation to Pathological Conditions Involving High Uric Acid in the Blood—James F. McDonald, M.D. and Victor E. Levine, M.D., of the Departments of Physiology and Chemistry, Creighton University College of Medicine, Omaha, Nebraska.

Evening Session
6:30 O'clock—Dinner
Field Club, Omaha, Nebraska

Friday, September 17

9:00 O'clock—Morning Session

21. Clinic—Internal Medicine—Hilding Berglund, M.D., Professor of Medicine, University of Minnesota College of Medicine, Minneapolis, Minnesota.

22. Peritoneal Drainage—C. W. M. Poynter, M.D., Professor of Anatomy, University of Nebraska College of Medicine, Omaha, Nebraska.

23. Autopsy Surprises—A. J. Miller, M.D., Professor of Clinical Pathology, University of Nebraska College of Medicine, Omaha, Nebraska.

24. Fungous Diseases of the Skin, Experimental Studies of a Case—J. T. Myers, Ph.D., Professor of Bacteriology, University of Nebraska College of Medicine, Omaha, Nebraska.

25. Some Problems in Medical Education—Irving S. Cutter, M.D., Ex-Dean University of Nebraska College of Medicine; Dean Northwestern University College of Medicine, Chicago, Illinois.

26. American Medical Association—Jabez N. Jackson, M.D., President-elect of the American Medical Association, Kansas City, Missouri.

NEW MEDICAL ARTS BUILDING

2:00 O'clock—Afternoon Session

27. Bronchoscopic and Esophagoscopic Cases of General Medical and Surgical Interest—Gabriel Tucker, M.D., of the Chevalier Jackson Bronchoscopic Clinic, Philadelphia, Pennsylvania.

28. Differential Diagnosis Between Coronary Artery Disease and Acute Abdominal Conditions—H. P. Boughnou, M.D., Instructor in Medicine, University of Kansas College of Medicine, Kansas City, Kansas.

29. Exophthalmic Goitre in Children—L. P. Engel, M.D., Assistant Professor of Surgery, University of Kansas College of Medicine, Kansas City, Kansas.

30. Experimental Mouse Cancer—F. C. Helwig, M.D., Assistant Professor of Pathology, University of Kansas College of Medicine, Kansas City, Kansas.

31. Observations Upon Morphology of Staphylococci and Other Organisms—James F. McDonald, M.D., John T. Little, M.D. and Ernest Ruckensteiner, M.D., of the Department of Physiology, Creighton University College of Medicine, Omaha, Nebraska.

SOCIETY PROCEEDINGS

Appanoose County Medical Society

The Appanoose County Medical Society met at the office of Dr. W. L. Downing, Moulton, June 30, for an afternoon and evening session. Each of the essayists made an excellent talk, the discussion too was great. All nineteen doctors present seemed very interested. Thirty-one plates were used at the banquet after which Dr. and Mrs. Howell gave an interesting report of their trip to Europe. The next meeting will be held the latter part of July at the Medical Assembly room, St. Joseph's Hospital, Centerville.

Program

Acute Pyogenic Infections, their origin, behavior, diagnosis and treatment—S. A. Spilman, Ottumwa.

The pregnant woman, things that beset her way. The importance of early recognition and proper treatment—F. B. Leffert, Centerville.

Otitis Media, its cause, complications and treatment—W. W. Syp, Centerville.

Impromptu: (a) Given a woman with her baby's head upon the perineum,—her care in detail to complete convalescence. (b) Pneumonias of infants and children the past season.

Banquet—7:00 p. m.

The medical surgical and social side of our trip to Europe under auspices of Clinic, Tri-State Society Iowa, Illinois and Wisconsin—Dr. and Mrs. E. B. Howell, Ottumwa.

E. D. Sellers, secretary.

Dallas-Guthrie County Medical Society

The Dallas-Guthrie County Medical Society were the guests of Dr. and Mrs. Voldeng at the Epileptic Colony, Woodward, at their present meeting. Twenty-eight were present. Dr. Ely presented the principal address.

Davis County Medical Society

The Davis County Medical Society entertained the members of Van Buren, Wapello and Appanoose Counties at a meeting on July 8 at the Bloomfield Country Club. This meeting was of the nature of a picnic.

Talks were made by C. G. Throckmorton on the Layman and the Doctor; by Dr. L. S. Gray, Albia, Annual Examinations of Healthy Persons; Dr. W. L. Downing of Moulton, on Report of Cases.

Marion County Medical Society

The regular meeting of the Marion County Medical Society was held at Pella, Thursday afternon and evening, June 24, at the American Legion Hall.

The afternoon program opened at 2 o'clock at which time Dr. James Wallace of the Iowa State Department of Health, Des Moines, brought out many valuable points in relation to questions of public health. Dr. J. R. Wright of Knoxville presented a discussion on Case Reports, followed by Dr. C. F. Aschennbrenner on the same subject. Dr. E. C. McClure of Bussey presented a report as delegate to the State Medical Society.

At the evening session Mr. H. E. DeReus, local attorney, discussed the subject of Legal Medicine.

Marion County Medical Society

The Marion County Medical Society met as the guests of the Doctors of Pella, July 1, for an afternoon and evening session. Dr. James Wallace of the Iowa Department of Health presented a discussion of the work of his department. Dr. J. R. Wright of Knoxville and Dr. Aschenbrener of Pela presented a series of case reports. Dr. E. C. McClure presented a report as delegate to the State Medical Society.

Scott County Medical Society.

Editor, Iowa State Medical Journal; I am enclosing a brief summary of the first half of the year's work in the Scott County Medical Society. As was stated before we are holding joint meetings with the Rock Island County Medical Society which includes the physicians of Rock Island, Moline and surrounding territory. This has proved not only satisfactory but stimulating to a high degree. Thirty to forty or more attend the preliminary dinners and sixty to a hundred are always present during the program. The business meetings are held separately and each society functions as a distinct unit except for program and social purposes. Our success leads us to recommend similar combinations to any of the moribund county societies with small membership, dulled enthusiasm, and listless or no meetings, that may exist in the state. I believe it would be constructive work of great promise in certain portions of the state.

Paul A. White, M.D., Secretary.

Jan. 12, 1926—Elks Club, Moline, Ill.
(Held Jointly With Rock Island County Medical Society)

Meeting called to order by Dr. L. E. Shafer, president. Installation of new officers. Report of treasurer. The committee on Periodic Health Examinations reported concerning the study made regarding furthering of this project and recommended that a meeting be held in the near future devoted to a discussion of ways and means of carrying out these plans and to a demonstration of such an examination by a prominent clinician. Motion made and carried. The committee on Periodic Health Examinations was continued as a committee on Publicity, composed of Drs. Marker, E. Block, and White. The person scheduled for the program did not arrive and a discussion was carried on jointly with the Rock Island County Medical Society regarding Periodic Health Examinations.

Jan. 14, 1926—Dinner Dance at the Outing Club

The annual Dinner Dance has become an affair of marked distinction in the affairs of the Scott County Medical Society. Dinner was served at 6:30 p. m. to seventy members and their wives or guests. The "Pest-House" Quartette, named in honor of Dr. Ficke who is boosting for a new Isolation Hospital, sang several numbers that were well received, they being mostly parodies with humorous allusions to members present. Drs. Hands, Doolen, Weis, and White composed the quartette. Dr. Elmer Senty entertained with a highly amusing take-off on one of "B. J.'s travel talks, getting in all of the egotistical swagger and complimenting various members of the local society on their success with the neurocalometer. This talk together with several musical numbers were presented over a faked receiving set, the broadcasting being done from the ball room upstairs, a phonograph producing the music. A receiving set was in the dining room. The program purported to be from Station WOC and most every one was deceived until B. J. (?) began his talk.

After the program the party retired to the ball room and enjoyed dancing for the remainder of the evening. The committee, Drs. Donohoe, Rock, Ott, Senty, and Braunlich are to be congratulated on the success of the affair.

Feb. 9, 1926—Davenport Chamber of Commerce

The business meeting was dispensed with and the whole time given to the program. Dr. Chas. W. Elliott, Chicago, outlined the need and aims of Periodic Health Examinations, tracing the history of the movement and telling the place these examinations should occupy in medical practise. He believes it to be an important movement in modern medical practise and feels that medical men should fit themselves to carry out such examinations. Following his talk he demonstrated a practical method of performing the examination on a patient who had volunteered for the purpose.

March 9, 1926—Rock Island Club, Rock Island, Illinois

At the business meeting the application of Dr. H. H. Rohwedder for membership was voted on and carried. Discussion regarding a new fee schedule was carried on and the matter referred to a committee, Drs. Lambach, Matthey and Rendleman.

Dr. Kalke, Chicago, gave a very interesting talk on Diverticulitis. Dr. Harrell, Chicago, read a paper on The Treatment of Gonorrhea. There was free discussion of both papers by members present.

April 6, 1926—Blackhawk Hotel, Davenport

In the business meeting motion was made to close the offices on Wednesday afternoons beginning May 6, and for six months thereafter, the secretary to place an advertisement in the daily papers stating this fact. There was discussion regarding the holding of a Golf-Sports-Dinner-Program during June, the project indorsed on motion, and a committee named: Drs. Carney, Strohbehn and Harkness. Communication from Dr. R. E. Jamison regarding giving anesthetics was referred to a committee, Drs. Schroeder, Matthey and Donohoe.

Dr. S. G. Hands, Davenport, read an excellent paper on Tuberculosis Laryngitis, illustrated with lantern slides. He emphasized the importance of routine examination of the larynx on the slightest indication and reference into special hands if there are demonstrable lesions. Discussion by Drs. Carney, Harkness and Hands.

Dr. Arthur Steindler, professor of orthopedic surgery, Iowa University, presented a talk on Compression Paraplegia in Spinal Disease, illustrated with lantern slides. He showed a number of cases where the spastic paraplegia due to compression of the cord did badly and in some cases even changed to flaccid paralysis under the usual recumbent extension treatment. By laminectomy, pressure was relieved in some, while in others transversectomy was done with drainage of the abscess, thus relieving the compression. Some excellent results were obtained. Dr. Bendixen led the discussion and pointed out that Dr. Steindler was a pioneer in this work, the method being contrary to the teaching of some of the leading orthopedic men of this and other countries.

May 11, 1926—Hotel LeClaire, Moline, Ill.

Meeting called to order by Dr. Shafer, president. Dr. Braunlich appointed to serve as secretary in the absence of Dr. White. Dr. Shafer stated that the Health Officer of Bettendorf asked that the Scott County Medical Society hold a Tuberculosis Clinic in Bettendorf. On motion the request was laid on the table. A communication was read from the Scott County Board of Supervisors regarding a pro

rata division of county patients between the hospitals. The communication was stimulated by a protest from the Davenport hospital regarding the small number assigned there. On motion it was recommended that the Scott County Medical Society recommend a proportionate division of county patients between Mercy and St. Lukes Hospitals, because men are admitted to practise in the Davenport Hospital that the Society does not recognize as ethical practitioners. On motion it was recommended that all pauper patients be under the direct control of the county physician. It was further recommended on motion that all county obstetrical patients be taken care of in a hospital.

A symposium on Hay Fever and its allied conditions with its modern treatment was given by Drs. Burton Hazeltine, Ralph Kuhns and A. W. LaFarge of Chicago.

June 23, 1926—Credit Island, Davenport

Invitations had been sent to the members of Rock Island, and Henry Counties of Illinois, and to Linn, Clinton, Cedar, Muscatine and Scott Counties of Iowa to be present at an afternoon and evening Golf-Sports-Picnic-Program affair. These included the dentists as well as the physicians of these counties. Those playing golf assembled at 2:00 p. m. and those coming for the sports and games came at 3:00 p. m. There was an excellent attendance both locally and from a distance. A picnic dinner was held under the broad oaks in the picnic grounds. The program was held in the pavilion. Dr. E. C. Rosenow, Mayo Clinic, Rochester, Minn. spoke on Focal Infection, showing slides illustrating his results, together with two reels of motion pictures. He stated that one criticism of his work had been that other workers had not been able to repeat it with like results. Now at least five independent workers in different parts of the world have been able to obtain like results in the reproduction of lesions from foci in patients. He spoke for the careful study of patients before eradication of suspected foci, recommending the removal of those most likely to be the cause then awaiting results instead of radically removing all possible foci at once. The talk left no doubt as to the importance of his work and the conservative manner in which he has presented his results. No. business meeting was held.

Twin Lakes District Medical Society—Fourth Annual Assembly

A dry diagnostic clinic of the Twin Lakes District Medical Society was held June twenty-fourth, at Rockwell City, with nearly one hundred twenty-five physicians attending in spite of threatening rain and unseasonable weather. The program furnished by clinicians and teachers from Iowa City and Des Moines was essentially a general practitioner's program and was thoroughly enjoyed. The subjects presented were: The Surgical Anatomy of the Female Perineum (lantern slides), by Dr. H. J. Prentiss, professor and head of the department of anatomy, histology, embryology and neuroanatomy, College of Medicine, University of Iowa. Diagnostic Difficulties in the Upper Abdomen, by Dr. Charles J. Rowan, professor and head of the department of surgery, College of Medicine, University of Iowa. One case each: Cardiac, Renal and Vascular Disease, by Dr. Fred M. Smith, professor and head of the department of medicine, College of Medicine, University of Iowa. Present Status of Scarlet Fever Control, by Dr. Don M. Griswold, commissioner State Board of Health, Des Moines. Water Sanitation, by John J. Hinman, Jr., associate professor of sanitation, College of Medicine, University of Iowa. Estimation of Physical Fitness, by Dr. John T. McClintock, professor and head of the department of physiology, College of Medicine, University of Iowa. Some Interesting Kidney Cases (illustrated), by Dr. Nathaniel G. Alcock, professor of genitourinary surgery, College of Medicine, University of Iowa. Miss Frances van Zandt, medical librarian, Des Moines, presented material available to the medical profession of Iowa.

Many of the physicians of northwest Iowa were privileged for the first time to receive instructions from the university medical school leaders. It was generally remarked that the presentation was calculated to make Iowa physicians feel a new pride in Iowa's great medical school, of whatever medical school they themselves might be graduates. The request of the program committee that actual case histories be abstracted, reviewed and discussed was scrupulously observed by the clinicians. Frequently an essayist accepts a title only to be polite—then roams over the whole field of medicine.

The important chairs of medicine and surgery filled in the past by such men as Bierring, Howard, Peck, Jepson and Middleton are seen today filled by men of like calibre and it is a source of satisfaction to Iowans in general. The many requisites of a department head in a medical school include a big heart and a wide sympathy for the men out in the active arena of practise. Another noteworthy matter is the interest of the preclinical teacher in clinical medicine. For instance, none may think henceforth of physiology or anatomy as dry, unrelated subjects with medicine and surgery. One practitioner gave it as his belief that the physiologist's contribution on physical fitness, was the most practical and helpful of the day's program.

The following doctors were registered; Benj. C. Hamilton Jr., Jefferson; P. W. VanMeter, Rockwell City; A. H. McCreight, Fort Dodge; S. D. Martin, Carroll; Otis P. Morganthaler, Templeton; Walter Fraser, Algona; C. R. Phillips, Alexander; G. H. Steele, Belmond; M. J. Kenefick, Algona; Chas L. Jones, Gilmore City; W. H. Green, Otho; Geo. Gibson, Fort Dodge; O. C. Lohr, Churdan; N. G. Alcock, Iowa City; John R. Black, Jefferson; Fred M. Smith, Iowa City; Walter Anneberg, Carroll; W. W. Beam, Rolfe; G. W. Kester, Grand Junction;

J. E. Galvin, Fort Dodge; F. E. Cressler, Churdan; N. S. Noble, Des Moines; T. J. Dorsey, Fort Dodge; D. J. Townsend, Lohrville; F. R. Pascoe, Carroll; A. C. Norton, Rockwell City; E. C. Hartman, Algona; Chas. J. Rowan, Iowa City; Richard Lucke, Jefferson; S. P. Free, Perry; Eleanor Hutchinson, Rockwell City; I. O. Pond, Perry; Margaret H. Nelson, Des Moines; A. J. Ross, Perry; J. H. Shipley, Rippey; S. Hinze Scott, Des Moines; Rose A. Butterfield, Indianola; J. M. Garrett, Fort Dodge; C. J. Saunders, Fort Dodge; E. S. Hielman, Ida Grove; A. P. Maloney, Fonda; H. F. Kiessling, Lehigh; H. J. Prentiss, Iowa City; J. N. Hoit, Rockwell City; W. W. Stevenson, Rockwell City; M. C. Porath, Varina; W. M. Shipley, Carrol; A. S. Crockley, Carroll; G. A. Everson; Plover; A. S. Hayden, Wall Lake; S. J. Townsend, Gilmore City; C. S. Stoakes, Battle Creek; A. W. Patterson, Fonda; R. E. Parry, Scranton; A. R. Anneberg, Carroll; J. M. Jackson, Jefferson; Jas. McAllister, Odebolt; J. M. Cooper, Rockwell City; J. H. Hovenden, Laurens; C. L. Putnam, Holstein; H. T. Gillespie, Fort Dodge; A. Arent, Callender; L. W. Loving, Laurens; L. E. Eslick, Rockwell City; L. H. Jones, Wall Lake; E. C. Sage, Eagle Grove; C. H. Morse, Eagle Grove; J. W. Presnell, Scranton; W. J. Findley, Sac City; Fred L. Blair, Lytton; M. J. McVay, Lake City; J. C. Riordon, Pocahontas; W. T. Peters; Burt; R. O. Wallace, Algona; L. W. Chain, Dedham; Geo. A. Hartley, Battle Creek; W. W. Webber, Pomeroy; Geo. Eldridge, Perry; E. W. Wilson, Rolfe; A. E. Acher, Fort Dodge; H. L. Fobes, Auburn; E. C. Longley, Lake City; Harold H. Ring, Iowa City; Don M. Griswold, Des Moines; W. R. Hart, Fort Dodge; John J. Hinman Jr., Iowa City; K. W. Diddy, Perry; L. L. Leighton, Fort Dodge; B. A. Smillie, Gilmore City; W. W. Bowen, Fort Dodge; F. H. McCray, Schaller; D. W. McCrary, Lake City; W. E. McCrary, Lake City; Robert G. Henricks, Manson; A. N. Thoms, Fort Dodge; H. W. Scott, Fort Dodge; O. R. Prettyman, Manson; E. F. Beeh, Fort Dodge; Richard P. Hamilton, Fort Dodge; Loran M. Martin, Fort Dodge; J. H. Sams, Clarion; Carl A. F. Holler, Goldfield; C. E. Stewart, Palmer; F. R. Patterson, Iowa City; E. G. Grover, Manning; James F. Parker, Pocahontas; F. L. Knowles, Fort Dodge; E. M. Kersten, Fort Dodge; S. C. Mulholland, Fort Dodge; J. W. Kime, Fort Dodge; W. M. Shipley, Ottosin; F. Cretzmeyer, Emmetsburg; C. H. Cretzmeyer, Algona; R. H. Lott, Carroll.

Resolutions of sympathy were offered to Dr. J. F. Studebaker who has recently passed through a series of operative adventures with himself the patient—at Mercy Hospital, Fort Dodge.

Officers of the Society are: A. W. Patterson, Fonda, president; P. W. VanMeter, Rockwell City, secretary and treasurer, and an executive committee composed of the president and secretary of the County Medical Societies of Calhoun, Carroll, Greene, Pocahontas, Sac, Webster, Ida and Wright.

P. W. Van Meter, Secretary.

IOWA HEART ASSOCIATION

Report of the President, Dr. Merrill M. Meyers, for the year May 12, 1925 to May 14, 1926.

This report will begin with more recent events and will conclude with a history of the beginnings of the movement copied from the files of The Campaign for July, 1925, which was a special heart issue.

The work of the Iowa Heart Association in conjunction with the Iowa Tuberculosis Association received the official approval of the National Tuberculosis Association in the report of Dr. H. R. Edwards, field secretary of the National Tuberculosis Association. A copy of this report was received in March and considered at a joint meeting of the executive committees of the Iowa Tuberculosis Association and Iowa Heart Association April 11. The report endorsed highly the work of the Iowa Heart Association and approved the expansion of the activities of the state tuberculosis association into the field of educational and preventive heart work.

In regards to clinics Dr. Edwards report states that the combination of heart and tuberculosis examinations in a series of socalled chest clinics greatly increased the opportunity for tuberculosis work as well as heart work.

Since the first of July, 31 county clinics have been held; 326 patients examined, 42 of whom were children; heart disease diagnosed in 201 cases; 280 local physicians were present.

These clinics are held upon invitation of county medical societies, are arranged with the authority of the Board of Control of State Institutions and are financed principally from Christmas seal funds.

Along the line of educational work twelve general news articles relating to heart disease were syndicated throughout the state. These yielded an average of 200 clippings and a total space of approximately 10,000 inches. In addition to these there were several special local articles in various communities.

Through the courtesy of the Extension Division of the University of Iowa of which Dr. E. H. Lauer is director 25,000 pamphlets entitled "Save Your Child" were printed. These were largely distributed through local associations of the Iowa Tuberculosis Association. They contained in brief and popular style the causes, symptoms and methods of avoidance of heart disease and tuberculosis.

The July Campaign, the monthly magazine edited by the Iowa Tuberculosis Association and printed by the Board of Control of State Institutions was devoted entirely to heart disease. Articles also appeared in each of the subsequent issues of The Campaign with two exceptions.

Research work was done by the medical department of the University of Iowa through Dr. Fred Smith and associates and at the Des Moines Health Center by individual physicians. Valuable statistics were furnished by the State Commissioner of Health.

Exhibits were held at the time of the State Fair, August and September, 1925; at the time of the State Teachers' Association, November; and at the annual meeting of the Iowa Tuberculosis Association in February, 1925. On the last occasion the Iowa Heart Association joined with the Iowa Trudeau Society in a special clinic which is not included in the above statistics. This was attended by a large number of physicians from various parts of the state.

Meetings of the executive committee were held jointly with the executive committee of the Iowa Tuberculosis Association in September and October, 1925, and February and April, 1926.

The history of the heart disease movement incorporated in The Campaign for July, 1925 is quoted here as a part of this report. It is as follows:

HEART

Heart disease now leads as a cause of death, taking the place of tuberculosis.

The leading scientists and physicians in the country believe that the application of the same methods directed toward the prevention of heart disease will secure results similiar to those attained in the case of tuberculosis from which the death rate has been reduced 51 per cent in 17 years.

This belief is based partly on the fact that there is a great deal of similarity both in the causes and in the treatment.

The present issue of The Campaign is devoted in a very large measure to heart disease. This number contains statistics and a discussion of cause, prevention and treatment. The material is presented in a form which will be interesting reading both to laymen and physicians. The statements have received the approval of some of the leading physicians in the state.

A New Public Health Movement

A campaign against heart disease has just been launched in Iowa.

On the night before the annual meeting of the State Medical Society at Des Moines, May 12, the Iowa Heart Association was formed.

This association is affiliated with the Iowa Tuberculosis asociation and the work will be conducted through the office of the tuberculosis association.

The president of the heart association becomes an ex-officio member of the executive committee of the tuberculosis association and the president of the latter occupies a similiar position in the former. The executive secretary of the Iowa Tuberculosis Association was made secretary of the Iowa Heart Association and a staff of workers of the former will be used in the promotion of the movement. The local associations in every county which represents the state tuberculosis association will be asked to take an interest in the heart disease movement as a part of their health work.

Nature of Work

Lines of operation so far planned include heart clinics, chest clinics (heart, tuberculosis, etc.), research, production and distribution of literature of a popular nature, promotion of the organization of permanent heart clinics in the larger centers, special study of statistics in cooperation with the State Department of Health and of the nature of the disease in cooperation with the Medical Department of the University of Iowa, publicity and other educational features.

History of the Movement

Physicians for some time have been particularly interested in this subject.

Dr. W. L. Bierring, Dr. Meredith Mallory and Dr. M. M. Myers all of Des Moines have given it special attention for some time. As a result of their efforts a local committee was organized consisting of Drs. W. L. Bierring, A. C. Page, John H. Peck, John Russell and Merrill M. Meyers, chairman. The Iowa Clinical Medical Society appointed a special committee on the subject consisting of Drs. W. L. Bierring, M. M. Meyers, John H. Peck, Fred M. Smith of Iowa City and Wm. H. Rendleman of Davenport. These committees represented by Drs. Bierring and Meyers presented a request to the executive committee of the Iowa Tuberculosis Association asking it to expand its work so as to include an educational and preventive campaign against heart disease. This proposition being accepted the state tuberculosis association made application to the National Tuberculosis Association for permission to so enlarge its program and to use a portion of future Christmas seal funds for that purpose. The executive committee of the National Association meeting at New York in April granted this permission. The consent of the American Heart Association with headquarters at New York was also secured.

The country at large will view with interest this pioneer health work in Iowa as up to the present time this permission has been secured for only two states, Wisconsin being the other.

A Recognition for Iowa

The following is quoted from the Des Moines Register of April 5, 1925:

"So high are the restrictions placed by the National Tuberculosis Association and American Heart Association that it is considered a high mark of efficiency in a state organization to be able to qualify.

"Dr. Peck's wire stated that the vote was unanimous and was based on a presentation of facts and credentials about the present condition of public health work in Iowa done both by public and private agencies and the cooperation existing between such agencies, including the board of control of state institutions, the state department of public instruction and the state tuberculosis association."

Iowa Heart Association

Following this action the Iowa Clinical Medical Society and the Field Activities Committee of the State Medical Society sent out notices for a meeting at Des Moines May 12 just preceding the meeting of the State Society. At this meeting the Iowa Heart Association was formed as described above. The officers and executive committee are as follows: President, Dr. M. M. Meyers, Des Moines; vice president, Dr. Fred Smith, Iowa City; secretary-treasurer, T. J. Edmonds, Des Moines; executive committee, Dr. W. L. Bierring, Des Moines; Dr. W. H. Rendleman, Davenport; Dr. V. L. Treynor, Council Bluffs; Dr. George W. Koch, Sioux City.

There will be committees on the following subjects: demonstration or consultation clinics, permanent clinics statistics, education and publicity, vocational guidance, research.

Of Interest to Physicians

The following letter recently sent out to county medical societies by Dr. W. L. Bierring, chairman of the Field Activities Committee of the Iowa State Medical Society, describes the plan in regard to clinics:

"County medical societies and individual physicians will be especially interested in an arrangement which has been made by the Field Activities Committee with the Iowa Tuberculosis Association and the Iowa Heart Association whereby demonstration or consultation chest clinics can be held without cost to the county societies.

"These organizations will be furnished examiners for tuberculosis, heart disease and all allied conditions.

"It is the aim to have only a few patients (selected in cooperation with their family physicians) and to make the clinic a consultation primarily for the benefit of the physicians. Of course, another object is to educate the public at large to the necessity of early and frequent examinations by the local or family physician.

"The expenses are divided between the local public health association or Christmas seal committee and the Iowa Tuberculosis Association. There is no expense to county medical societies or physicians.

"If you desire to take advantage of this arrangement, an invitation to hold the clinic, from the county medical society and signed by its president or secretary, should be sent to the Iowa Tuberculosis Association, 518 Frankel Building, Des Moines. This association will then secure the consent of the local association and its agreement to assist in defraying the expenses and will make such arrangements as securing the clinicians, providing nursing assistance, clinical supplies, etc.

"This service is made possible through funds derived from the annual sale of Christmas seals in your county and throughout the state."

MEDICAL ARTS BUILDINGS

The Texas State Journal of medicine notes that an eleven story Medical Arts Building at Wichita Falls, a five story Medical Arts Building at Corpus Christi, and a four story Medical Arts Building at Abilene are to be erected.

It is stated that the Medical and Dental Arts Club of Chicago will erect a twenty-three story professional building at the southeast corner of Wabash avenue and Lake street, which will be ready for occupancy May 1, 1927.

The Medical Arts Building of Tampa, Florida, announces that it will erect a twelve story office building at the corner of Plant and Grand Central avenues at the cost of about $11,200,000 which will be devoted exclusively to the use of physicians and dentists.

PERSONAL MENTION

Dr. Don M. Griswold, who for the past year has served as health commissioner of Iowa, has resigned and will return to the State University at Iowa City, to take charge of the recently created department of public health of the College of Medicine.

Dr. Nickelsen from the Methodist Hospital at Omaha has associated himself in practice with Dr. Smith of Milford and Dr. Collister of Spencer.

Dr. H. P. Moen of Inwood has moved to Estherville where he will continue the practice of medicine. Dr. Moen is a graduate of the Iowa University School of Medicine and was an assistant in the department of surgery for three years.

Dr. Charles S. Rowan, professor of surgery at the Iowa University, was operated upon at the Mayo Clinic, August 6, for gall-bladder and appendix infections. The report on August 9 was favorable.

Dr. C. S. Stokes of Battle Creek, who for many years was secretary for the Ida County Medical Society, was given a dinner recently in honor of his efficient services to the society. Dr. Stokes is about to take up his new field of work at Dysart.

OBITUARY

Dr. F. A. Christenson, formerly of Lake Mills, died at his home in Seattle, Washington, July 3, 1926. Dr. Christenson was born May 14, 1867 in St. Louis, Missouri; graduated from the Central College of Surgeons, Indianapolis in 1895; located in Lake Mills the same year where he practiced until 1908, when he moved to Seattle, Washington.

Dr. J. W. Coakley of Creston died at the Greater Community Hospital, Creston, July 15, 1926. Dr. Coakley was born in Bangor, Maine, in 1855, came to Madison county, Iowa, in 1873. He attended a

medical college in Kansas City, Bennett Medical College, Chicago, and graduated from the Barnes Medical College, St. Louis, 1879. He practiced at Mt. Etna, Iowa, from 1880 to 1906. In 1906 he moved to Creston where he practiced twenty years.

BOOK REVIEWS

OCULAR THERAPEUTICS

A Manual for the Student and the Practitioner by Doctor Ernest Franke, A. O. Professor of Ophthalmology and Chief of the Second Eye Clinic at the University of Hamburg. Translated by Clarence Loeb, A.M., M.D., Oculist to the Michael Reese Hospital, Chicago, Illinois; 183 Pages, Cloth, $3.50. C. V. Mosby Co., St. Louis, Missouri.

The translator states that he was led to undertake the translation of this book, because there are available to the English speaking oculist very few books to which he can go for information for the treatment of his patients. When the remedies known to the oculist have proved inadequate, and he must turn to other sources for information, this compact volume will obviate the necessity of searching through more voluminous works on therapeutics.

In chapter one, the author impresses upon the physician the fact that he must remember that frequently he is dealing with a disease that involves the whole body, not a single organ. This thought is carried out throughout the book. Chapter two discusses the general treatment of tuberculosis and syphilis, serotherapy and organotherapy. Protein body and irritative therapy. Ray light and electrical therapy. Medical treatment, which consists of twelve pages devoted to an alphabetic list of drugs and a brief description of each used in the general treatment. Chapter three takes up the local treatment, consisting of mechanical measures, warmth and cold, light and ray treatment. The local medical treatment is discussed at length. It also contains a long list of drugs and their local application. Chapter four takes up the special parts of eye affected, with a list of diseased conditions and a brief resume of their treatment after each disease.

The book is an excellent one, the only one of its type in English, and is recommended to all interested in ophthalmology.

E. P. Weih.

EYE SIGHT CONSERVATION SURVEY

Completed by Joshua Eyre Hannum, M.S., Research Engineer. Published by the Eye Sight Conservation Council of America. New York City. Price $1.00.

This volume of 219 pages was issued in response to the need for a general review of the entire subject of eye sight conservation. It condenses the results of an exhaustive study, containing a summary of the literature of the field since 1914, and the results of the original research and investigation conducted by the Council.

The literature of eye sight conservation has been widely scattered and not until the appearance of this volume, has it been available for the use of government and social agencies, educational institutions, parents and teachers, and the general reader. There are definitions for vision, acuity of vision, normal vision, defective vision, error of refraction, normal eye, and defective eye.

Chapter on eye hygiene takes up, structure of the eye, eye strain, eye care, hygiene of reading, effect of motion pictures on the eye. The following eye defects are discussed: hyperopia, myopia, astigmatism, presbyopia, cross eye and color blindness.

Chapter three contains a brief discussion of the more common eye diseases. These are chapters on eye sight, and education. Eye sight and occupation. Eye protection and illumination.

The concluding chapter comments interestingly on the struggles of noted persons with poor eye sight.

Simple visual acuity tests reveal that 25 per cent of the school children have manifest defects of vision and symptoms of eye strain, and that conditions much more serious were found to exist in the workshops of the country.

Much time and effort has been spent in the preparation of this book. It is a valuable contribution to the literature on this subject, and it should be in the hands of every professional man interested in the eye.

E. P. Weih.

LECTURES ON NUTRITION

A Series of Lectures Given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Nebraska, Iowa and Washington (St. Louis), 1924-1925; 12 Mo.; 243 Pages; Illustrated. W. B. Saunders Co., 1925. Price $2.50 Net.

This book is made up of a series of six lectures delivered at the several universities above mentioned by a group of men who have recently been engaged in research work on particular features of nutrition, as for instance, The Measurement and Significance of Basal Metabolism, by Francis Gano Benedict and Problems of Metabolism, by Graham Lusk.

LECTURES ON HEREDITY

A Series of Lectures Given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Nebraska, Iowa and Washington (St. Louis), 1923-1924; 12 Mo. Pages; Illustrated. W. B. Saunders Co., 1925; Cloth $2.50 Net.

The two volumes above mentioned are of great educational interest. The first series being a series of lectures by a group of research workers on the special features of Heredity. It had been arranged

at the Mayo Foundation and local chapter of Sigma X at Rochester to have these lectures presented at the university centers of the several states above named. The material included the research and work that had been gathered and formulated by this group of research men

Soon following the publication of the volume on Heredity appeared the researches on Nutrition.

MEDICAL FORMULARY

By E. Q. Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia; Twelfth Edition, Revised. Lea & Febiger, 1925. Price $2.50.

This convenient and helpful book again appears. It contains the information that the busy practitioner needs constantly about him. It is impossible for the doctor to carry in his mind the formula he desires and so he refers to Dr. Thornton's book as he would to a dictionary.

THE TREATMENT OF INFECTIONS AND INFECTIOUS DISEASES WITH MERCUROCHROME—220 SOLUBLE

An Analysis of 210 Cases that Furnished Many Definite Examples of Therapic Sterlisans Magna. By Hugh D. Young, M.D., J. H. Hill, M.D., and W. W. Scott, M.D., Baltimore.

THE ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1925.

Government Printing Office, Washington, D. C.

ANNUAL REPORT OF THE SURGEON GENERAL UNITED STATES NAVY, 1925

Government Printing Office, Washington, D. C.

NEW AND NON-OFFICIAL REMEDIES

A new edition of this handy book has just come from the press of the American Medical Association. Price $1.50.

Every day you are probably solicited to try some new remedy.

Some are meritorious—they may be of direct and immediate value to your patients.

Some are worthless, irrational preparations which may do more harm than good.

How do you discriminate?

How do you tell their actual merit?

How do you learn wherein this merit lies?

Do you have a list of trade-named remedies of proved merit?

Every year the Council on Pharmacy and Chemistry publishes this information in the book New and Non-official Remedies. With it in your possession you can readily select the remedies safe to use, thus defending yourself against elaborate claims of manufacturers' agents.

American Medical Ass'n.,
B. M. Bruce, Book Division.

SQUIBB BRANCH OFFICE IN NEW ORLEANS

In the course of a swing through the southern states, general sales manager R. D. Keim of E. R. Squibb & Sons recently completed arrangements for the opening of a branch office in New Orleans, Louisiana. This office, to be located in the Queen Crescent building at 344 Camp street, will carry a complete stock of biologicals, arsphenamines, insulin and a selected list of other Squibb specialties. The purpose is to provide the medical, dental and pharmaceutical professions of Louisiana, Mississippi and neighboring states with fresh stocks of these products, kept under proper refrigeration at all times and available any hour of any day.

Mr. Keim was accompanied on his southern trip by R. S. Westgate, assistant general superintendent of the Brooklyn Laboratories of E. R. Squibb & Sons. They are joined en route by southern states sales manager W. S. Iverson of Atlanta and office manager J. J. Toohy of the Kansas City branch.

MEETING EMERGENCIES

Associated with many present-day emergencies in which the health of a community is concerned, in which, perhaps, the lives of many persons are in jeopardy—are hurry calls from physicians for biological products.

The discovery of small-pox in a neighborhood and vaccination by the wholesale; an explosion, such as occurred at Lake Denmark, New Jersey, where the possibility of many cases of tetanus threatened; an outbreak of diphtheria in a school or community; a mad dog scare—all these are emergencies in meeting which the medical profession is depending more and more upon the administration of biological products.

Physicians in most instances, even in private practice, want immediate service in this form of treatment. They wish to be sure of the potency of these biologics and they depend in nearly every instance upon pharmacists to provide ready and effective cooperation in both quality and service.

In consideration of these demands, many of them amounting to emergency proportions, E. R. Squibb & Sons are providing greater facilities for furnishing both the medical and the pharmaceutical professions with the products whose delivery in the shortest possible time may save innumerable lives.

Through its depots that are being opened in various cities throughout the United States, the House of Squibb is providing sources of supply for arsphenamines, insulin and biological products, kept under proper refrigeration and quickly available at any

(Continued on advertising page xxvii)

MEETING EMERGENCIES

(Continued from page 432)

hour to the physicians and the pharmacists of the respective neighborhoods.

Thus far depots have been established as follows:

New Orleans, Louisiana, Depot at 402 Queen and Crescent Building, 344 Camp street. Telephone: day, Main 8636; night, Walnut 4392.

Pittsburgh, Pennsylvania, Depot at 604 Maloney building, 339 Second avenue. Telephone: Court 1220.

Minneapolis, Minnesota, Depot at 237 Transportation building, 317 Second avenue, South. Telephone: day, Geneva 3248; night, South 8716.

Seattle, Washington, Depot at 216-217 Crary building, Fifth and Union streets. Telephone: Elliot 1878.

Baltimore, Maryland, Depot at 1027 Munsey building, 5 North Calvert street, telephone: Calvert 4308.

Additional depots with similar facilities are being planned for Los Angeles and Boston.

Smilar service will, of course, continue to be provided to pharmacists and physicians through the New York office, 80 Beekman street, and through the various branches, located as follows:

Chicago, Illinois, at 323 West Lake street; San Francisco, California, at 608 Folsom street; Kansas City, Missouri, at 706 Delaware street; Atlanta, Georgia, at 270-272 Ivy street.

Pharmacists should advise their physicians of these exceptional facilities, the greatest value of which will be apparent in emergencies where, upon early delivery, may depend the life of one or many persons. Make a note of street and telephone numbers of the nearest Squibb depot or branch. Every progressive pharmacist should talk it over with the Squibb representative in his territory so that when that emergency arises there will be no confusion, no lost motion but simply an immediate call for the product needed and equally prompt delivery.

NEW AND NON-OFFICIAL REMEDIES

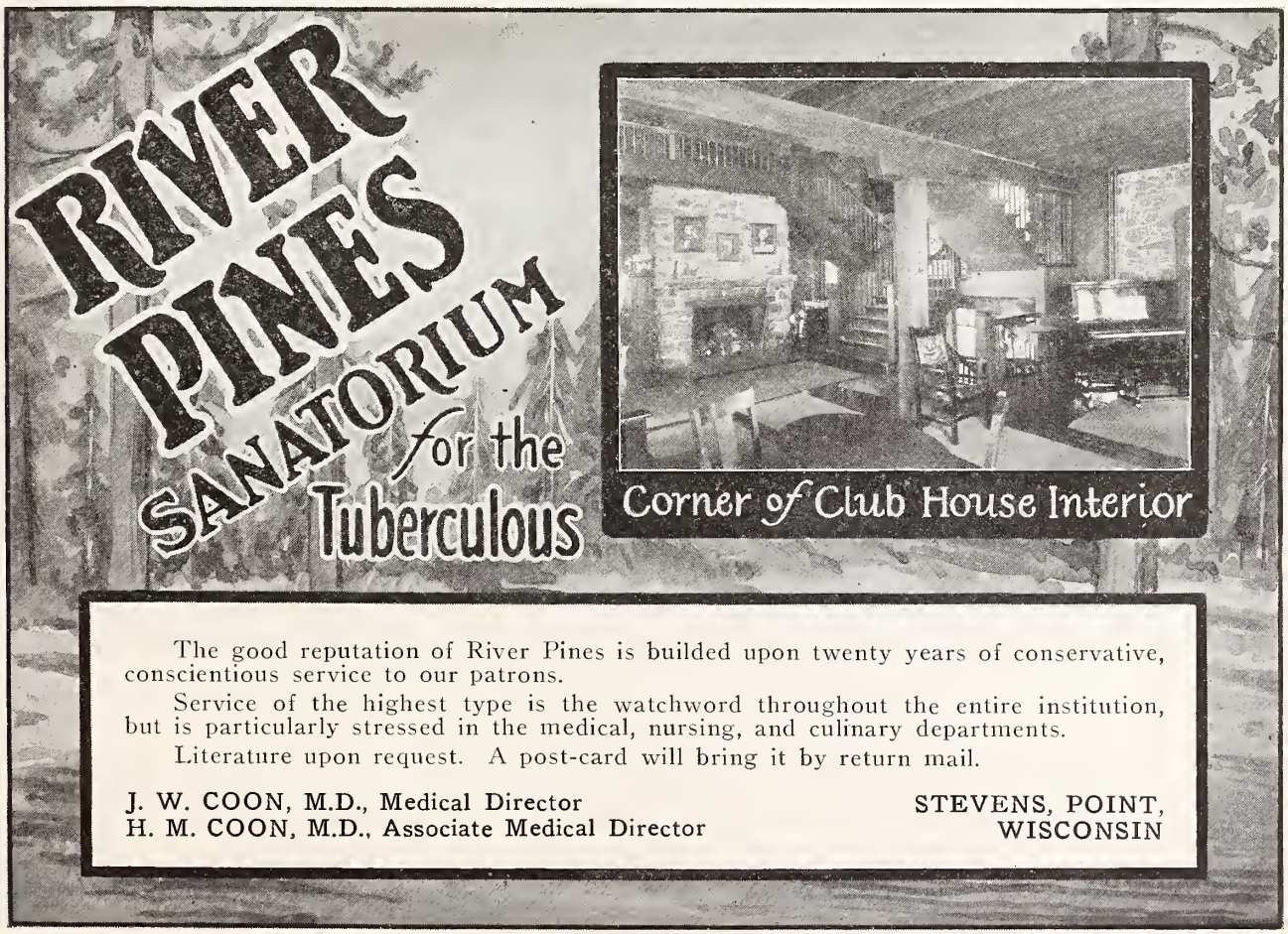
In addition to the articles enumerated in our letter of May 29th, the following have been accepted:

Armour & Company:
- Pituitary Liquid (Surgical)—Armour.
  - Ampules Pituitary Liquid (Surgical)—Armour 1 c.c.

Parke, Davis & Company:
- Pertussis Immunogen.
- Pneumococcus Immunogen.
- Silvol Dougies 5 Per Cent.
- Silvol Ointment 5 Per Cent.
- Vaginal Suppositories Silvol 5 Per cent.

Powers-Weightman-Rosengarten Company:
- Calcium Phosphate Tribasic—P. W. R.
- Magnesium Phosphate Tribasic—P. W. R.

Nonproprietary Articles:
- Tribasic Calcium Phosphate.
- Tribasic Magnesium Phosphate.



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The Journal of the Iowa State Medical Society

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TOMORROW IS ALSO A DAY*

Albert R. Mitchell, M.D., Lincoln, Nebraska

Why I should have been summoned to appear as one of your symposium of celebrities on this, your anniversary, I have not been able to determine, and whatever the result of my effort, the fault must be charged to your committee which had courage enough to reach across the Missouri River even to the head of the waters of Salt Creek in Nebraska. After listening to Dr. Jackson and to the "Problems of the Deaf" by Dr. Goldstein, I feel like proclaiming with St. John the Divine, "He that hath ears to hear, let him hear".

Those of us who love the myths and mysteries of the East, those of us who read with contemplative wonder the Sagas of the North can but guess at the ancient cultures which wrought these marvelous creations. That both reflect a refinement of narrative not yet fully understood, mirror a spiritual insight into life responsive to conditions from which they came, there is no question. As this your seventy-fifth anniversary carries you back to more than the average life of men today it occurred to me, that as I was given freedom of choice in my subject I would antedate even your beginnings by a few thousand years just for the sake of contrast. The thoughtful man who lives today in the fearful race for place and power lives also in, and through all the ages past, for out of them has come the present.

I said the thoughtful men, not the restless beings who circumscribe existence within the radius of an automobile tire, or in the effervescent headlines of the printed page. It is my conception of present day conditions which brought to mind the ancient greeting to a hastening modern traveler, and the reflective reasoning which gave it birth, "Tomorrow is also a day". While this philosophy would not apply to a bleeding vessel or to many of the emergencies which the doctor meets in his daily work, it does apply to the constructive efforts of our medical faculties, our pre-medical courses, our medical colleges and to our medical societies; these units which must shape our future course in the interest of the profession and its individual personnel as well as its relationship to that body politic which means the whole people whom we serve. When I speak of the public I mean the great lay mass, and to understand what that means we must have one primary, potent fact in mind and never lose sight of that fact, which is, that the masses of the people, no matter how many diplomas they have, no matter how many books they have read, no matter how much money they have accumulated, whether as bankers, manufacturers, great merchants or great preachers, can never understand the professional viewpoint, and the professional view loses its identity when it blends, or attempts to blend, with that of the business world. This is especially true of medicine and most of those who make large contributions to medical research realize this and place their contributions in the control of medical directors as advisors. Hence it is that a large responsibility rests upon those who are preparing men for our profession to the end that its ideals of service be not lost in the modern maxim of "I want mine". We cannot sacrifice scientific training in either our pre-medical or in our graduate work, we cannot lower standards, but there is one phase of our work which I believe can be changed to the advantage of the physician and to others who look to us for direction.

We speak of the Science of Medicine, and it is one of the nearly exact sciences; but of the art we write and speak little. Modern writers seem to have lost the magic link which connects the science and the art. Art is science in action and without art, "then indeed is our teaching vain". I am often asked, I suppose because I am temporarily an official of the great national body of medical men and possibly because old Father Time has drained the source of pigment from my hair, "What is the matter with the profession?" Prophesy is not in my line, so I shall not

*Presented before the Seventy-Fifth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 12, 13, 14, 1926.

prophesy, but recur again to my subject, "Tomorrow is also a day". When Mr. Carter uncovered the then ancient tomb of Tutankamen the world marveled at the revelations of an ancient people, but hardly had we rested from that great story, than came another much more marvelous, much more specifically enlightening, for it makes of King Tut a comparative modern, although still ancient, compared to our Diamond Jubilee. I refer to the discoveries of Sir Henry Rawlinfson, which carry us back 6000 years. The records show that there was, even then, a civilization whose written records are now being read to us, in written language, scientific architecture, accounts and records which go only with a civilized people.

Why were those ancient and splendid civilizations buried in the sands of time, and so utterly lost that new records preceded our present age and linked us with the past through the myths and Sagas, no longer ancient? Mr. Andrews and his co-workers think that they have found the birth-place of the human race and it is possible that they have, but whether they have or have not, we have enough to get a "line" upon the people who have preceded us in life's battles. It is out of the birth and decay, the rise to influence and power, out of the accumulated experience of all the past, that now in the twentieth century the modern traveler, in his haste and hurry is met in the lands where life has lived for seven or maybe a hundred thousand years, with, "Tomorrow is also a day". Is it the conscious concentrated wisdom of the past which tells the hastening traveler to go slow? Did it mean to say to him, that while in youth he should learn from the age old wisdom of those who have experienced life? When men began to battle the elements they thought that by imitating nature they could control nature. They knew no power above them, hence came magic, which in nature assumes that one event follows another necessarily and inevitably without the intervention of any spiritual or personal agency. Thus, says Frazier, its fundamental conception is identical with that of modern science. They were not superstitious but were honest in belief, a faith in the order and uniformity of nature and honest efforts to benefit themselves, and of their faith they were seeking the truth, but when a truth was found, magic ceased and became science. Foiled and baffled at almost every turn in his conception of nature's laws, he naturally began to endow things which would not respond to his efforts, with an unknown power which he felt, but could not see. Thus began the religions of the world, thus was formulated the most enduring and inspiring influence which is a part of the nature of all men. Out of man's necessities and out of his want of understanding has come the influence which has written the Divine Literature of the world, built marvels of architecture and the greatest of music.

And now comes science, that marvel of magic and religion, demonstrating the folly of the one and making clear the understanding of the other, for the very foundation of progress is faith, belief in power or powers not known and not seen. The development of every advance in science is a firm faith which leads to analysis and to the demonstration of facts. Since the end of the eighteenth and the beginning of the nineteenth centuries the march of science in all directions has been so rapid and so marvelous that, no matter what happens it no longer disturbs the mental balance, even of the untrained. All accept the facts and do not stop to consider the sources.

But here let us note an exception, and that exception is in the popular understanding of the facts of medicine. Some how it happens that medicine and religion seem to run on nearly parallel lines and too often remain parallel through all the crooked pathways of the human mind, or what functions for mind, so far as the average public is concerned. The reason for it lies in the claims made by over-zealous would-be saints who work upon the unstable, and the thoughtless, who re-instill the stories of ancient miracles; dressed in the abbreviated guise of superficiality. I wish that time would permit me to follow the fascinating steps of our development, but we are living in the now, and may only look back to watch our shadows recede into eternity while the future opens before us. As there are those here whom we gratuitously designate laymen, it may be well to say a few words, which, while they may seem boasting and cover only a part of the truth, yet that part is the whole truth. First, I claim for the medical profession that it has done more to lift men into truth than any other insitution in the world.

Second, that it has saved from suffering and death; more than any other influence and that it has saved more treasure for men by eradicating disease than all other influences combined, not forgetting Wall Street. We doctors all know this.

Yet immortal and eternal as our accomplishments are, we are still mortal and as human beings in the midst of our fellows, are yet subject to the influences of our environment. What is the predominant note of that influence in our present day? Were I to answer in one word, it would be publicity, transformed, it means ad-

vertise. And why advertise? It pays. Pays what? Pays in money. It is the modern, up-to-date system. Let us be logical and reason together. If we are to advertise (and some newspapers and special publications seem to be longing for the privilege of helping us in our endeavors to let the people know what we can do), let us see how this would work.

"'The Cuttum and Curem Clinic' has established, in harmony with modern business methods, a service which will be of real value to the people. On Monday of each week our specialists will give cut rates on appendicitis—chronic, interval cases in groups of five will be given a 50 per cent reduction for cash. Acute cases happening to come in on this special day will have first care at a material reduction, hospital and nursing rates cut 10 per cent.

"On Tuesday and Thursday we will operate tonsil cases in groups of five to ten at $18.96, local or general anesthetic. In groups of more than ten we will give a further reduction to $15.98. Our operators are trained men and the best service is guaranteed."

If we are going to advertise why not do it right? This is the business view.

It may be that advertising pays in service, but it is only in more, not better service. While it is true that the profession no longer lives in the exalted isolation of its past as the sole possessor of superior qualities, yet it remains as true today as in the fifteenth century that your training is as far removed from general understanding as it ever was. Men do not change much and if they advance in their understanding they only keep pace with the changes taking place about them; they do not come into any closer touch with the development of the science of medicine than they had when our science and our art was relatively primitive. In other words we are still just as far ahead as we ever were and there is no reason to think that the relative position will ever change. How can it be otherwise? Ours is a highly specialized profession. I do not mean by this a profession controlled by specialists, although we are rather overloaded even now, but that the material facts which are ours are ours because of years of work required to master them. The lay mind can never approach understanding because it has not the foundation built upon the bed rock of our art, in anatomy, physiology, biology, chemistry and therapeutics; hence one of the gross errors into which we have fallen is our effort to teach the public more than the simplest laws of health and to acquaint it with facts of importance in preventive measures. The publicity methods of societies and the misnomer colleges, preaching to people things, they themselves do not know is not worthy our great calling. When we know a fact of public interest, as for example the influence of toxin-antitoxin, it needs but the publicity of the profession itself and not of a public meeting and newspaper notoriety. The methods of our profession for reaching the public to acquaint it with the things it should know and can understand are the ethical and proper methods.

Our journal, "Hygeia", is a fountain of useful material and as it grows, will supply all needed information. We who carry the burdens and the responsibilities which go with our craft, are reaping today the whirlwind of our misguided efforts to teach the people more than they can learn, hence there has sprung up in our country and in other countries as well, a vast number of commercial enterprises, ostensibly for public health, actually for profit and profit alone, and the worst of it is they have commandeered many physicians of the country who fall for the blandishments of these non-professional commercial enterprises.

I wish that this seventy-five years old baby would use its influence collectively, to persuade if possible, to coerce if necessary, its membership to decline service, in, or service to, these unholy things in sheep's clothing, posing as altruistic institutions with a long list of honorable names on their directorate, many of them unauthorized. We must not cheapen ourselves by aiding these institutions.

When we as doctors are consulted by someone who is ill, who has lost his or her normal relationship to food or fellows, who has a pain, mental or physical, we have a duty which he, the subject, interprets in one way, and that is, "I want relief from that pain". He does not care whether you call it cholecystitis, renal colic or botts, what he wants and what he has come to us for is relief from his immediate suffering, and that relief we can give in the majority of cases without endangering a diagnosis and a safe outcome of the case.

And what of this profession of ours. In November, with other members of the board of trustees, I was a guest of the North Branch of the Chicago Medical Society. Four deans, four horsemen, four aces of the four great Illinois Universities were the speakers of the evening. The question in their minds and hearts was "What about our graduates?" It is a pressing question. To my mind it has a solution, not in lowering standards but in the methods of teaching and in the application of those methods when the graduate contacts the one source of his re-

turns after years of student life. One of our troubles is that our schools take highly trained men and cultivate them in a laboratory technique, but not in the laboratory of everyday life. They turn out scientists, not doctors, not clinicians. Our modern man wants his blood, bacteriology, chemistry, his x-ray, his basal metabolism, his this and that, and a dozen more things before he reaches a conclusion. As a matter of fact "Old Doc", in more than 95 per cent of his cases will make his diagnosis and give the proper treatment before our highly trained technician has prepared his case for the osteopath or some other cultist who does things and promises more and taking into consideration that a large percentage of most diseases are self-limited, he gets away with it. It is clinical, bedside training in the use of the common tools of our trade that is most needed at this time, and yet, nearly all of our progress has come and must come through the highly trained technicians, they lead us all. Without them progress would cease, but we need more clinicians at this time.

Then, too, we have made specialism fetish, builded shrines where the people go with burnt-offerings and often get burnt. Some of these "department store" establishments have, to the public mind, famous men, because their advertising material says they are great. One recently proclaimed the late war a blessing in disguise because it taught, among other things, the benefits of typhoid innoculations. The statement is not true of course, for the profession knew and most of the world knew, long before the war the benefits of innoculation. I do not know the author but what can be the workings of a mind that finds recompense in the torn and bleeding misery of the youth and beauty of young manhood, manhood at the period of life when it is full of hope, when its heart is warm with love, for its ideals, youth, as yet unburdened by the cares of later years when it can give of its maturity the love of a father for his child and his home? What kind of mentality except morbid selfishness for publicity can draw comfort from the pain and suffering of others? If it needs such sacrifices as those of war to introduce the benefits of a vaccine to the world, the world had best learn of vaccines benefits by a slower process. The wounds of that awful war will not be healed for a hundred years. The injuries done to the receptive sensitive centers of this generation will be transmitted for many generations. It is only the commercial spirit grafted upon a perverted spot in our professional spirit that can put forth such a sentiment. The statement was a sensational proclamation and good publicity stuff for it is of such stuff that publicity is made. We hear too, our pseudo sanitarians preaching from the housetops that human life has been lengthened from thirty to forty years but they fail to state that the saving is in infant life, that little or nothing has been added to man's life between the ages of thirty and sixty years, the most productive period of life. As a matter of fact there is an increase in morbidity within those years from cardiovascular diseases in spite of the efforts of the dental surgeon and the tonsillectomist. There is one more, out of many subjects I might touch upon that your seventy-five years of experience gives you the right and places the obligation to tell the truth about. I refer to the overstress that is being given to school athletics. It is our duty to stop the practice now so common of leaving to nurses or school doctors, men not in active practice, the care of our children patients. School supervision is very desirable and the school nurse has her place but neither she nor the school physician should act in more than an advisory capacity, final decision must rest with the family physician who in cases of doubt should call council.

The track meets, swimming races, basketball and other sports which put an overstrain upon the developing child should not be permitted. I simply call attention to it, for I did not come here to criticise the work of the present day, for this is the greatest age of the greatest progress that we know of in written history, but I verily believe that we have come to a place when we must realize that "Tomorrow is also a day" and stop, look and listen.

Our profession, its traditions reaching back to the earliest needs of men, has led the hosts of the living and of the dead through all the generations of men, from magic to religion, from religion to science, it has proclaimed against superstition and idolatry, without thought of reward other than service to man and still leads, linking the mythical and the physical with the spiritual, with the eternal truths of the universe, seen and unseen. We realize that man, even in his present state is still a human being with the aspirations and the longings which are a part of his nature, that while he has advanced in harmony with his environments he has still the human longings, but the human limitations.

Leaders he must have, men who sense the longings and the aspirations of the world about them and transform them into harmonies of life. Men are but cosmic dust, caught in the currents of existence which will sweep them on to their final destiny, whatever that may be; ours it is to direct as best we may, to quiet life's currents freighted

with its human souls, that suffering be made less, and to keep forever in the human heart the promise and the hope of an immortality.

EMBOLIC MANIFESTATIONS OF HEART DISEASE*

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The embolic manifestations of heart disease are not only of academic interest but are of considerable clinical importance since their appearance very frequently sounds the first warning of serious disease. This is particularly true of embolism and thrombosis of the coronary arteries.

In considering cardiac coagula it is of utmost importance to distinguish clearly between those forming before death and those forming after death. The former are solid or partly solid structures, primarily formed from the elements of the blood, which develop in one or more of the chambers of the heart during life. Even after detachment, their point of origin is usually apparent.

The practical importance of cardiac emboli is further emphasized by the fact that they occur in about 25 per cent of all patients dying of heart disease.[18] It is a well recognized fact that emboli are very prone to occur in certain forms of endocardial valvular disease, particularly mitral stenosis. While this statement is true, I will attempt to show that no form of heart disease is free from the perils of embolism.

Bacterial Endocarditis

Bacterial endocarditis is virtually always attended by embolic processes at some time during the course of the disease which are not infrequently the immediate cause of death. The recognition and identification of these embolic phenomena often permit the absolute identification of the disease. Both the acute and the subacute forms of bacterial endocarditis practically always attack valves that have previously been damaged by disease, chiefly by rheumatic fever, arteriosclerosis, congenital defects and syphilis. The liability of the occurrence of emboli does not seem to depend on the type of valvular lesion present but rather on the presence of organisms in large numbers.

The work of Libman, Murray, Clawson and others, has permitted a clear-cut separation of the forms of bacterial endocarditis and their identification as quite definite clinical entities. It will be recalled that acute bacterial endocarditis is chiefly caused by *Streptococcus hemolyticus*, the pneumococcus, *Staphylococcus aureus* and the gonococcus, while the subacute form is due to *Streptococcus viridans* in about 95 per cent of the cases. In about 5 per cent of the cases of subacute bacterial endocarditis, Libman was able to isolate the *Bacillus influenzae*.

In order to appreciate fully the way in which emboli are formed it is necessary to familiarize ourselves with the character of the lesions of bacterial endocarditis. The mitral valve is more frequently attacked than the aortic valve in the acute form, while the valves of the right side of the heart are affected in about one-fourth of the cases. The lesions or vegetations are usually large, consisting of a mass of blood platelets, invaded by polymorphonuclear leukocytes, and such large numbers of organisms that the surface is virtually a layer of colonies. The vegetation is not covered by endothelium, and organization occurs in the deeper layers when death does not take place within the first few weeks. Ulceration frequently occurs and the cardiac structures may show abscesses and perforations.

The lesions of the subacute form may be large or small but are usually smaller than those of the acute form. The mitral and aortic valves are most frequently attacked while involvement of the tricuspid valve is rare. The vegetation likewise is comprised of agglutinated blood platelets, invaded by large numbers of bacteria. There is little tendency to ulceration and when it occurs, it is chiefly limited to the aortic valve. The inflammatory process is productive, there being a tendency to fibrosis, sclerosis and round-cell infiltration.

The likelihood of embolic phenomena is therefore apparent from the nature of the lesions of the bacterial forms of endocarditis. Probably the most frequent embolic processes are petechiae in the skin and mucous membranes. These are small and usually have white centers when occurring in the subacute form of the disease. Petechiae with yellow centers usually indicate a staphylococcic infection. The mucous membrane of the conjunctivae is a favorite site for petechiae.

Hemorrhagic lesions may occur under the nails in subacute bacterial endocarditis which Blumer so aptly calls "splinter hemorrhages". They are linear hemorrhages beneath the nail, about 4 to 5 mm. in length and several millimeters from the growing edge of the nail, looking like splinters accidently introduced.

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Occasionally small, slightly nodular hemorrhagic areas, which are not tender, occur in the palms of the hands and the soles of the feet (Janeway lesions). They are most frequently observed in the acute form. In the subacute form, tender subcutaneous nodes, the so-called Osler nodes, frequently affect the fingers and toes, but are occasionally found in other localities.

Gross emboli in the vessels with resultant visceral infarction or peripheral gangrene, are quite frequent. Infarction of the brain and spleen seem to occur most frequently. Embolic or mycotic aneurysm, purpura and atypical erythematous lesions also occur. I have observed one case of subacute bacterial endocarditis in which the cutaneous manifestations were identical with those of acute disseminated lupus erythematosis; Ulrich has observed two such cases.

Another very interesting and characteristic embolic lesion of subacute bacterial endocarditis is the acute glomerulonephritis which is usually present when death has ensued during the active stage of the disease. These lesions were first described by Loehlein and later fully studied and verified by Baehr and Lande. These characteristic glomerular lesions consist of swelling of the endothelium of the glomerular capillaries, with consequent complete avascular obstruction of the loops, resulting in disintegration and active proliferation of the epithelium of Bowman's capsule, so that in many glomeruli the capsule is occupied by a crescentic mass of swollen and proliferated cells.

Rheumatic Endocarditis

Emboli are extremely rare in cases of acute rheumatic endocarditis and when they do occur are usually insignificant, because the vegetations are small and verrucous in character; although desquamation of the endothelial cells occurs, the adjacent endothelium proliferates rapidly, covers the vegetation and limits their size. The vegetations later become organized and flattened to form a ridge-like scar along the line of closure of the valve leading to subsequent stenoses and insufficiency.

In chronic endocardial valvular disease embolic processes frequently occur especially with the onset of myocardial insufficiency.

In about 30 per cent of the cases in which death from cardiac failure results from mitral stenosis emboli are present. Detachment of mural coagula in mitral stenosis is usually a sequel to auricular fibrillation, but many instances occur in the absence of this abnormality of cardiac mechanism. The frequency of mural thrombosis of the auricles in auricular fibrillation is due, of course, to the fact that these chambers are no longer dynamic, and thus favor the development of coagulation of the blood elements. Detachment of particles from the mural thrombi is favored if auricular fibrillation is supplanted by normal rhythm, and the dynamic function of the auricles thus restored. The re-establishment of normal rhythm may occur spontaneously or may result from the use of quinidin. The possibility of producing emboli is one of the greatest perils attending the administration of this drug. The increased stasis attendant on decompensation predisposes to embolic detachments. Mural thrombosis in the ventricles may also occur in mitral stenosis, particularly when dilatation of these chambers is marked. Mural thrombosis in the right auricular appendage in mitral stenosis is frequent, and very often results in pulmonary infarcts. Visceral infarctions are likewise frequent, particularly of the brain and spleen, and peripheral gangrene follows occlusion of an artery by thrombi detached from the left auricle.

An interesting type of thrombus occasionally occurs in the left auricle in mitral stenosis, the so-called ball thrombus.[1] These thrombi are unattached to the cardiac structures and imprisonment occurs when their size exceeds the first narrowing in the vascular path ahead of them.

The frequency of emboli with aortic stenosis is quite comparable to that with mitral stenosis. This observation is interesting because auricular fibrillation rarely occurs with aortic stenosis. The frequency of embolic phenomena with this valvular lesion is probably dependent on the very marked enlargement of the heart that usually precedes death. Detachment of thrombi from both the right and the left side of the heart occurs with about equal frequency.

Emboli likewise occur with aortic insufficiency but to a much lesser degree than in the aforementioned types. This is especially true of the syphilitic type.

Coronary Thrombosis and Embolism

Probably one of the most interesting and most important embolic phenomenon of heart disease is coronary arterial occlusion by thrombosis or embolism. It is interesting because in the past its clinical recognition was rare, while of recent years its identification is the rule. Its recognition is important, for the resulting symptoms may frequently simulate an acute surgical abdominal lesion; needless to say, operative intervention in these cases is not only highly embarrassing but extremely hazardous.

As the result of sudden occlusion of a branch of the coronary arterial tree by thrombosis or embolism, an anemic infarct occurs, which may be small or large depending on the size of the vessel occluded. If the area is small and is not in a vital portion of the heart, repair by fibrosis occurs, and a small area of scar tissue results which may not permanently impair myocardial function. If, however, a large area of myocardial softening occurs, immediate death may ensue, or, if the heart has withstood the immediate insult, serious myocardial insufficiency may result, or a true ventricular aneurysm may develop at the point of infarction and eventually lead to rupture of the heart.

The pathologic changes most usually found associated with coronary occlusion are atheromatous degeneration of the first portion of the aorta, including the sinuses of valsalva and the coronary orifices. These intimal changes undoubtedly predispose to the development of thrombi, which when subsequently detached cause obstruction to the coronary circulation. I have seen three cases of myocardial infarction in which the origin and course of the embolus was very unusual. In all instances a detached portion of a mural thrombus of the left auricle was by mere chance deflected into the coronary circulation instead of continuing through the aorta.

A definite syndrome usually attends acute coronary occlusion, and its recognition is extremely important. The onset of the attack is usually sudden and consists of excruciating retrosternal or upper abdominal pain with or without the usual radiation typical of angina pectoris. It is not at all unusual for the acute occlusion to occur without previous anginal attacks. The pain is usually severe from several hours to several days. The protracted duration of the attack is one of the important points in distinguishing acute coronary occlusion from simulating conditions. The patient, as a rule, is in profound shock, with an ashen color and facies denoting great anxiety; there is a cold perspiration and the extremities are clammy; the respirations are shallow and rapid, the pulse thready, and the blood-pressure low. Fever, often attaining 100° to 102°, may be present within twenty-four hours. This syndrome is most often confused with the acute perforation of a gastric or duodenal ulcer, the rupture of a distended gall-bladder, or acute hemorrhagic pancreatitis.[6, 8, 17]

Physical examination, soon after the onset of the accident, may reveal only weak, rapid heart tones, the rhythm at times being interrupted by premature contractions or by respiratory arrhythmia. Often within eighteen or twenty-four hours a distinct pericardial rub is audible, usually to-and-fro in character, due to the inflammatory reaction of the visceral pericardium overlying the infarcted area. If the infarct is large, the area of cardiac dullness will be found to increase, owing to the weakening of the myocardium. The upper abdomen may be distinctly resistant and almost rigid on palpation, falsely pointing to disease of the upper abdomen. This is in part, at least, due to the splinting of the diaphragm, a protective mechanism resulting from the patient's attempt to reduce the excruciating pain.

The leukocyte counts vary from 9,000 to 25,000, and in over half the cases range from 15,000 to 20,000 and may completely mislead the uninitiated. The differential leukocyte count usually shows the polymorphonuclear cells to comprise from 80 to 90 per cent of the cellular elements. The leukocytosis is due to the resulting infarction and not to the thrombosis. The resulting pericarditis plays little or no part in the production of leukocytosis. Leukocytosis, within two hours after the onset of the attack, may be as high as 20,000. Libman has shown that, when the leukocytosis does not definitely recede within a few days, or if it increases with or without a preliminary decrease, and there is no complication which explains it, progressive necrosis or an intraventricular thrombus, or both, are present. The suspicion of myocardial necrosis is important prognostically owing to the tendency to cardiac aneurysm and rupture of the heart.

I have observed intraventricular thrombosis associated with myocardial infarction, particularly in cases in which the infarction was situated in the apical portion of the left ventricle, the mural thrombus forming in relation to the infarction. It is not unusual in these cases for hemiplegia to arise suddenly from cerebral embolism. This possibility should always be borne in mind.

About one-half the patients with coronary thrombosis and embolism die at the time of the attack or within a few days, while those who survive the immediate effects of the accident live for from a few months to several years with varying degrees of cardiac handicap.

Myocardial Degeneration

The detachment of mural coagula in degenerative myocardial disease occurs in about 15 per cent of the cases in which death is due to heart failure. The incidence is about equal in both the arteriosclerotic and the hypertensive types. The occurrence of emboli in the myocardial degenerations of exophthalmic goiter and of hyperfunctioning adenomatous goiter is considerably less,

probably because of the increase in the rate of circulation accompanying the elevated basal metabolic rate. The mural thrombosis is found about as frequently in the ventricles as in the auricles, in contrast to the status in chronic endocarditis in which the auricles are dominantly the seat of thrombus formation.

Detachment of emboli in the degenerative forms of myocardial disease, as in chronic endocarditis, is more apt to occur when auricular fibrillation exists or has recently existed.

PERICARDITIS

Pericarditis unassociated with endocardial valvular disease is rarely accompanied by embolism. The chief exception to this is those terminal cases of chronic adherent pericarditis in which great cardiac enlargement and profound myocardial insufficiency have occurred. Primary tuberculous pericarditis is another exception, particularly the type characterized by massive recurrent effusion. Thrombosis is caused chiefly by the stasis induced by the marked mechanical effect of the effusion.

CARDIOVASCULAR SYPHILIS

Embolic phenomena in cardiovascular syphilis are quite uncommon. This is probably due to the fact that sudden death is frequent either from rupture of aneurysm or from progressive occlusion of the coronary orifices in aortitis. The cases of cardiovascular syphilis, in which death results from progressive myocardial failure, are of course subject to the same hazard of embolism as attend other forms of heart disease. This statement must be modified somewhat since auricular fibrillation occurs much less frequently in aortic lesions than in any other form of valvular disease. In a previous series of 500 cases of auricular fibrillation, the incidence of aortic lesions was only 2.6 per cent.[16]

THE MECHANISM OF PRODUCTION OF INTRACARDIAC THROMBOSIS

It has been quite generally supposed that intracardiac thrombosis depended chiefly on circulatory stasis due to slowing of the circulation consequent upon myocardial insufficiency and the mechanical interference of stenosis. While stasis is undoubtedly a very important factor, we are led to believe that infection likewise plays an active role in the production of thrombosis. The fact that embolism, in our experience, occurs with greatest frequency during the late autumn, winter, and early spring, the seasons when infections of most types are prevalent, is very suggestive evidence. Furthermore, in a group of cases carefully studied by Rosenow during this last winter, he was regularly able to demonstrate the presence of small green-producing diplococci in the thrombi and was able to cultivate them in culture. It is interesting to note that fever and leukocytosis are absent prior to the detachment of coagula but occur promptly after their liberation.

These observations are fundamental but require more experimental experience in a larger group of cases.

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INFLUENCE OF RECTAL DISEASE UPON THE GENERAL HEALTH*

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As we delve deeper into the problems of healing the sick it is ever more noticeable that the practice of medicine is a unit and incapable of artificial divisions into specialties; and the successful internist or surgeon is one who regards the present complaint in its intimate relationships to the body as a whole. There must be cooperation between the laboratory and clinical observer as well similar to that between the specialist and the general practitioner, and any study or analy-

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sis that will show the interdependence of the various branches of medicine will be welcomed.

Our greatest need is accurate clinical observation and interpretation. Clinical medicine must always take precedence over the laboratory findings. The one who sees and studies the patient is the one who must evaluate diagnostic data from all sources and give the final opinion, although of course many inaccuracies are bound to creep into the data thus obtained.

The subjective symptoms of rectal lesions are extremely interesting though often difficult to explain. They are lassitude, nausea, somnolence, vague fears, indefinite pains and numerous nervous phenomena (neurasthenia and psychoses). Thus rectal disease may be evidenced in various ways; first, absorption of bacterial products from infected areas in the crypts or deeper tissues of the rectum may alone cause systemic disorders similar to those from infected tonsils.

Second, by reflex disturbances through the gastrointestinal tract, notably constipation, flatulence, distention, nausea and at times vomiting.

Third, by direct irritation giving discomfort, fullness, itching and at times bleeding and pain. This condition may occur without local rectal symptoms just as infected tonsils may exist without local irritation. These cases of proctitis are very frequently associated with foci of infection in other parts of the body, especially in the mouth, such as infected teeth and tonsils. In women it is often associated with cervicitis. Rectal disease is often present with other foci in the gastrointestinal tract such as ulcers, cholecystitis, chronic appendicitis and colitis. Some of these symptoms can be attributed to the absorption of septic products and others to mechanical irritation. When the patient suffers from absorption of septic foci, there is present a toxemia rather than a bacteremia. Thus

1. Rectal disease is frequently present when unsuspected because of the absence of local symptoms.
2. General systemic conditions may be caused or aggravated by ulcerative conditions within the pelvic bowel.
3. The symptomatology is often obscure.
4. Hemorrhoids and fissures are usually accompanied by other lesions, especially focal infections of the mouth.

Many of these conditions may go on for years without any great amount of distress as long as the pathological process remains above Hilton's white line.

It is only when the disease reaches below this line that the patients are aware, through subjective symptoms, that they have any rectal trouble, and for that reason they neglect to mention the rectum when consulting their physician, thus allowing a possible simple condition to develop into a cancer, stricture or some other serious disease. In the meantime, while these conditions are developing, the patient will be taking treatment for constipation, headaches, spinal trouble, rheumatism or some other group of symptoms without relief, when a thorough examination of the rectum and anus would reveal the underlying cause.

Any little growth just within the rectum, such as an elongated papilla, small ulceration near the crypts, a small fissure or a foreign body will develop some of the most distressing symptoms in other parts of the body, such as headaches, bladder irritation, rheumatic pains in the back and lower limbs, profound depression of spirits or extreme irritability, due to the resultant disturbance of the sympathetic nerves and absorption of toxins.

The close relationship of the sympathetic system to the sensory system of the rectum explains the modus operandi of rectal divulsion in causing the restoration of respiratory function during failure in cases of surgical shock; start of this function in the new born and restoration of cardiac and respiratory function in failure in certain convulsions of young babies and children. The act of divulsion reacts upon the sympathetic system causing cardiac and respiratory stimulation quicker than our most powerful drugs can act.

The Influence of Rectal Disease Upon Other Portions of the Digestive Tract

The intimate and minute anastomoses of the pelvic blood-vessels makes it possible for a reflex wave of nerve force from the sympathetic plexus to disturb all of the pelvic organs.

The blood-vessels of the pelvis are important when considered in connection with the nervous system, as branches of the same trunk supply the genitals and rectum. All of these vessels carry a large number of nerves and irritation of any of these filaments will disturb the lumen of the blood-vessels resulting in irregular circulation and congestion.

The blood-vessels of the genitals and of the rectum belong to similar branches, and have no relation except as carrying nerves, on account of reflexes resulting from peripheral irritation. We know that the nerves of the pelvis, so far as the internal genital organs are concerned, are mainly the sympathetic nerves, and the external or those near the skin are the cerebrospinal nerves. A local irritation of a nerve may cause a vasomotor constriction at the point of irritation and vasomotor dilatation in some remote organ as a direct

reflex effect, or that it may cause vasomotor dilatation at the point of irritation, and a contraction in a remote organ. A reflex spasm can exist indefinitely as long as the irritation is kept up. Thus we learn that permanent anemia or permanent congestion of an organ may be produced as a direct result of vasomotor disturbance, caused by a source of irritation, such as a rectal ulcer, a blind internal fistula, chronic constipation in the rectum, or chronic constipation with resulting catarrh, or ulceration in the sigmoid flexure. Stone in the bladder, or ulcer of the bladder may by reflex irritation cause anemia or congestion of other pelvic organs.

The ligaments that help to support and hold the pelvic organs in position all have quite a muscular element in their makeup, and are subject to changes brought about from congestion or anemic conditions thereby becoming relaxed as a result of changes in blood supply that may originate from reflex irritation in any part of the pelvis. In this manner displacement of the uterus and its adnexa may often be explained.

The lowest forms of life have no nervous system yet they live by means of chemical action. After development proceeds and the viscera are formed there are certain ones which produce secretions which are discharged into the blood stream and have as their function the influencing of growth and body activities. These are called "internal secretions". They have the power of influencing distant tissues and to a limited degree, have the property possessed so highly by the nervous system of correlating activities. The mucosa of the small intestine belong to the glands having such activities.

Conditions of disease affect the physical being through stimulation of nerves resulting in reflex action which causes a disturbance of function. This action expresses itself strongly through the vegetative nervous system because this is the system which presides over vegetative activity and consequently controls the most important functions of the body. It also alters the secretion of endocrine glands and changes the chemistry and physics of the cell, all of which alters normal physiologic activity.

There are many substances circulating in the body fluids which have to do with metabolic activity. Some of these are the products of physiologic action, others are the products of pathologic action. Some influence the body favorably and when provided in normal quantities keep up normal physiologic activity and produce harmful effects only when produced in pathologic quantities; others influence it in a harmful way and produce functional disturbances even if present only in small amounts. We now know that the so-called "ductless glands" have a very important physiologic function. They produce so-called "internal secretions" which influence many body activities and have a marked effect upon growth and repair.

Aside from the "ductless glands" many other glands such as those of the gastrointestinal mucosa, the liver and the pancreas, produce internal secretions which exert an influence upon physiologic activity. Pathologic chemical action which results from substances being thrown into the circulation when tissues are injured is also extremely common in disease conditions.

Bayliss and Starling have shown that secretin, a substance which is produced by the duodenal glands when stimulated by the acid contents of the stomach, passes into the circulation and comes in contact with cells of the pancreas and increases the flow of pancreatic juice. It also has a lesser effect upon the cells of the liver, producing the flow of bile. The marvelous part of this action is its selectivity, as emphasized by the fact that secretin must pass through the liver, right heart, lungs, left heart and the systemic structures, it must pass through practically all structures of the body, but stimulates only the pancreatic and liver cells. Thus bile and pancreatic juice, two substances which are necessary to further digestion, are stimulated by a secretion which is brought about by the acid when poured into the duodenum. Secretin will produce the flow of pancreatic juice when all the connector neurons going to the pancreas are severed. This does not necessarily mean that the action is independent of nerves, for it may act upon the parasympathetic cells in the organ.

In the voluntary system, action and inhibition of action are performed through the will, nerves supplying different sets of muscles coming into play. In the vegetative (involuntary) system, on the other hand, there are two methods by which action and inhibition of action are produced. One is through a single system of nerves in which the excitability varies according to the strength of the stimulus applied; the other is through two opposing sets of neurons, the one belonging to the sympathetic, the other to the parasympathetic system. When the same tissues are supplied by both sets of nerves, usually one activates and the other inhibits action. The pilomotor muscles and the blood-vessels for the most part are controlled by the sympathetic nerves only, and relaxation and contraction depend upon the degrees of the stimulus. In all structures belonging to the en-

teral system except the esophagus and the cardiac end of the stomach (lungs, pyloric end of stomach, small intestines, colon, liver, pancreas and body of the bladder) equilibrium is maintained by the excitability of the cells of the sympathetics and parasympathetics, equalling or approaching each other; equilibrium is destroyed, producing functional derangement, when one over balances the other.

At the beginning and end of the intestinal tract there are some structures which have a combination of voluntary and involuntary nerve control.

There are many interesting syndromes in the gastrointestinal tract expressed on the part of both the sympathetic and parasympathetic systems which should be considered from the standpoint of action or inhibition of action and classed according to whether such activity belongs to the sympathetic or parasympathetic neurocellular mechanism. All symptoms which represent increased muscular or secretory activity of the gut proper (excluding the sphincters which bear opposite innervation) are due to predominance of parasympathetic activity. Among such may be mentioned hypersecretion in the stomach (hyperchlorhydia) or intestinal tract; hypermotility in the same leading to such conditions as diarrhea, mucous colitis, colicky pains and spastic conditions of the intestinal tract.

Such conditions may be influenced through the inhibitory action of atropin upon the vagus, or through stimulation of the sympathetic neuromuscular mechanism by adrenalin or by calcium which has a tendency to increase the action of the sympathetic so that they may depress the heightened vagus action to such a point that equilibrium may be again restored.

There are also certain sympathetic syndromes on the part of these structures which need to be considered, such as the hyposecretion and hypomotility represented by the slow digestion and constipation which accompany the acute toxic stage of infections. This is explained by the fact that the toxins act upon the sympathetics and overbalances the action of the parasympathetics represented by the vagus, destroying the nervous equilibrium and producing a predominant sympathetic effect. The same neurocellular condition exists in chronic hyposecretion and hypomotility and likewise results in relaxation of the bowel and constipation.

These conditions may be improved, at least temporarily, by the administration of sodium or magnesium salts, particularly the sulphates, which stimulate the vagus mechanism and cause an increase in glandular secretion and an increase in muscular contraction. Such conditions may be influenced at times by general stimulation for the parasympathetic systems such as pilocarpin.

While the viscera may be insensitive to many stimuli which would cause pain if applied to the skeletal sensory nerves, yet they are capable of expressing pain through the skeletal sensory nerves when irritated, as is frequently seen in disease. The mechanism by which somatic pain is felt when injury is done to a sensory nerve as by the harmful impulse being carried centralward and being transferred through intracentral paths in the cord and brain until perceptive centers are reached. Not only is the individual made aware of the pain, but he also locates it in the area supplied by the sensory nerve which receives the irritation. Visceral pain, on the other hand, is a pain caused by stimuli arising in an internal viscus which is referred and felt in the areas supplied by the skeletal (somatic) sensory nerves. The perception centers are made aware of it in the same manner as they are made aware of somatic pain, but instead of perceiving the pain as occurring in the viscus, they recognize it as being in the sensory skeletal nerve or nerves whose cell bodies are so arranged in the central nervous system as to be rendered irritable by the stimuli which are transmitted over the afferent sensory nerves coming from the viscus in question. The referred pain from the viscera is produced by transference of the sensory impulse from the sympathetic sensory to the spinal sensory neurons, and from the vagus sensory neurons to the sensory neurons of the fifth cranial nerve (trigeminus). When the stomach is inflamed, the pain is in the epigastrium, when the small intestine, the pain centers lower about the umbilicus; and when the colon, the pain is still lower between the umbilicus and pubes.

Sympathetic connector fibres for the colon come through the lower thoracic and upper lumbar segments of the cord. Those which supply the cecum, appendix, ascending and transverse colon, find their motor cells in the mesenteric ganglion, while those which supply the descending colon, sigmoid and rectum are in the inferior mesenteric ganglion. The nerves for the descending colon probably arise from the left half of the cord, for the reflexes are on the left side of the body.

As in other portions of the canal, sympathetic stimulation relaxes the musculature (except the internal anal sphincter which it activates) lessens the secretory activity of the glands and produces vasoconstriction or vasodilatation according to the character and strength of the stimulus.

The Innervation of the Sphincters—In the innervation of the gastrointestinal tract, the parasympathetics are the activating nerves for both the smooth musculature and secretory glands, while the sympathetics are the inhibitory nerves. This holds true for all parts of the digestive tract, and those structures formed from it, such as the respiratory tract, the liver and pancreas, and part of the genitourinary tract, with the exception of the sphincter muscles.

The anal sphincter is a law unto itself. Irritation of the sympathetic nervous system causes its contraction, and the only thing that will open the sphincter is the passing down of a proper peristaltic wave.

The anal outlet is under the control of the sympathetic nerves and when this nervous control is interrupted the peristaltic action of the colon ceases, thus allowing accumulations to take place affecting different parts of the body through absorption of toxins. Taking laxatives does not remedy the trouble for they simply irritate the glands of the intestinal canal and bring out more liquid which flushes out the new material while the old concretions remain in the colon undergoing absorption and poisoning the whole system.

The sigmoid corresponds to a trap under a sink, with this exception, however, that when the sigmoid becomes filled it will automatically empty itself into the rectum, and this is when we have our first warning that there is something to be evacuated.

The disarrangement of this beautiful automatic action brings about a general stasis of the whole colon, and more or less accumulation of waste material remains permanently in the rectum, sigmoid, transverse colon and cecum.

Constipation with rectal disease may be explained on the theory of interference with Keith's neuromuscular sphincters. An irritable focus at any one of these nodal points as in the anal region, may send impulses through the splanchnic nerves, which communicate with the remaining sphincters in the large and small intestine and thus block peristalsis. This may be followed by atony of the intestinal wall. The connection between the several centers, (a) anal; (b) pelvic colon and rectal; (c) transverse colon; (d) ileocecal; (e) duodeno-jejunal function; (f) duodenal and perhaps (g) the cardiac sphincter can sometimes be demonstrated by radiographic examination of cases with rectal lesions. These anatomical lesions are in keeping with the symptomatology.

There are two factors underlying all functions of the alimentary canal—secretion and motion. Each section of the digestive tube in turn with its particular secretion, performs its task and passes its contents onward for the next step; the body appropriates what it needs and the balance is passed out. With these functions of secretion and motion acting normally, we have no more thought of the stomach and bowels than of the spleen and lungs. When either function is perverted our attention is called to the abdomen with aches and pains, or else some part remote from the digestive canal notifies us of disturbance. All diseases of the gastrointestinal tract may then be divided into (1) those of perverted secretion and (2) those of perverted motility. The secretory disturbances are comparatively few in number and even these secretory disturbances do not always exist as primary entities. They are frequently the result of lack of motility elsewhere, or else are due to a perverted nervous system, as in neurotic hyperacidity and in colica mucosa. The majority of digestive disturbances are those due to perverted motility, flabby muscles. They are the mechanical diseases, and while hypermotility is at times encountered, by far the greater number are due to the other extreme, hypomotility or atony—the inability, more or less complete, of a hollow viscus to empty itself after its chemical functions have been performed.

Regarding the digestive canal as a hollow muscle, we realize the immense importance of normal muscular tonicity in maintaining the correlation of chemical changes, which follows one after the other, if normal digestion, assimilation and defecation are to be maintained. There must not be undue retention at any point, else decomposition processes begin, or mucous infiltration of the food mass follows, which may render the next digestive step difficult or impossible.

There is an army of people who possess a large debilitated cecum and ascending colon. This is the weakest part of the intestinal tract, and is often the first point where atony shows itself by delay in lifting its contents into the transverse colon.

We are not dealing with ptosis, Lane's kinks, adhesions or Jackson's membranes, but mere atony, of the intestinal tract normal except for atony. These cases of atony of the cecum have occasional pain suggestive of appendicitis, sometimes the appendix is removed, but the symptoms return as before. The harmful influence of atony in the colon at large needs no comment. The $5,000,000 the American people spend every year for cathartics testifies to the universality of atony, for nine of every ten cases of constipation are atonic.

Atony is the basic factor in that long series of systemic disturbances dependent on gastrointestinal autointoxication, headache, dizziness, furred tongue, mental lassitude, joint pains, with lowering of mental and physical efficiency.

Beyond these systemic disturbances there are many distinct pathologic entities of the alimentary appendages created by atony. In the wake of an atonic stomach follows hyperchlorhydria, mucous gastritis, ultimately the denuding of the mucosa at the pyloric antrum—ulcer. Atony of the duodenum is followed by infection of the gallducts, with concomitant disease of the gallbladder and pancreas. Atony of the cecum is the most potent factor in appendicitis. Food decomposition at this point permits the appendix to be flooded and bathed with the pathogenic bacteria of the cecum. The bacteria of the diseased appendix are the bacteria of the cecum. The large number of cases of atony of the colon which come to me with the scar of appendectomy, fully convinces me of the relation of these facts. Cancer of the sigmoid is practically always preceded by a tonic constipation. The long-continued and frequent impaction at this point favors denuding; ulcer of the sigmoid is the next step and malignancy the next. Malignancy of any mucous surface in the alimentary canal is the necessary terminus of retention, impaction, bacterial invasion, ulceration. The last step in the phenomena is made possible by two concomitant factors due to atony and retention, namely, bacterial invasion into and beyond the mucosa and the vitiated nature of the portal circulation, contaminated by soluble toxins of nitrogenous origin. Under such conditions an infiltration and stasis of the lymphatic vessels and spaces is so complete that when denuding has taken place, healing is impossible from the nature of the blood supply and the lack of lymphatic drainage. If healing be long retarded malignant proliferation is the next step. Atony is the first step in the production of adhesions within the abdomen. Retention lowers the vitality of the mucosa, favors the increase of the colon bacillus and paves the way for invasion into deeper structures. My experience has been that adhesions and atony go hand in hand; in those cases where adhesions exist there is always a flabby peristaltic muscle.

The viscera are insensitive but pain may arise from peritoneal irritations and from tension on the fibers of the muscular coat of the alimentary canal. All pain must be referred on account of the scantiness of the afferent fibers in the viscera and their defective power of localizing internal sensations.

ACUTE RUPTURED GASTRIC ULCERS*

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Included under this heading are acutely ruptured duodenal ulcers, as well as those occurring in the stomach. They both probably have the same etiology. As far as symptoms and diagnosis are concerned, there is no great importance in differentiating them. I wish to deal with those ulcers which rupture acutely either after giving a previous history of upper abdominal distress or those ulcers recently developed, going on to rapid perforation. Ulcers slowly perforating and surrounded by an area of protective inflammatory tissue are not considered, unless they rupture suddenly into the general abdominal cavity. Verne C. Hunt of the Mayo Clinic has stated that by far the larger number of perforating ulcers with which they deal at the operating table are of the chronic type, being surrounded by an area of protective inflammatory tissue, and not giving the symptoms of an acute perforation. In a series of 232 operations for gastric and duodenal ulcers, as reported by Balfour of Rochester, there were two of them for the acute perforating type.

Acute ruptured gastric ulcers are seen most often by the general practitioner and upon him largely depend the lives of these patients.

An incident which impressed me very much occurred during my interneship. A patient was brought from the admitting room to my ward, with the diagnosis of an acute appendicitis. A surgical clinic was in progress in one of the amphitheatres and thinking this patient would make good material, I prepared him for operation by making a white blood cell count and shaving his abdomen. As I remember, the admitting room diagnosis seemed correct. The patient was wheeled to the operating floor. The surgeon, conducting the clinic came behind the scenes, asked a few questions of the patient, felt of the abdomen and said to me, "This is a ruptured gastric ulcer and not an acute appendicitis". Much to my surprise, he found a hole in the anterior wall of the stomach, in the region of the antrum. I do not wish to extol snap shot diagnoses by reciting this incident, but I do wish to emphasize the fact that the symptoms and physical findings of acute ruptured gastric ulcers are striking. Since that time, three other cases have presented themselves. All happened to have been through the anterior wall of the stomach, with the same symptoms and physical findings, and treated in much the same way. Some of you have seen

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many more than this, but these are sufficient to have stimulated my interest in the subject.

Pain is intense. Hertzler states very succinctly, that the French describe this pain as "brutal". Often it causes the patient to double up or fall, wherever he may be, moaning and sweating. The usual dose of morphine is not sufficient to quiet the pain. One of our patients here had one and a quarter grains, with incomplete abatement.

The location of the pain is at first over the upper abdomen—later shifting to other parts, depending upon the location of the ulcer. If the perforation is through the anterior wall of the stomach, gastric contents may flow down over the great omentum, down along the colon, or into the pelvis. The cause of the intense pain is, of course, the acid gastric contents coming in contact with the sensitive peritoneum.

In addition to the intensity of this pain, is its abruptness. One of the patients had attended a dance, and had eaten heartily of a midnight lunch. The following morning he had slight stomachache. About noon while riding a horse along the country road, he was taken with a sudden, intense pain in the upper abdomen, which caused him to fall off the horse, and lie by the roadside where neighbors found him. Another had eaten an evening meal of meat and potatoes. At ten he was awakened by an intense upper abdominal pain. In his agony, he rolled out of bed. His wife could not lift him back; she pulled the mattress onto the floor and rolled him onto it. The third patient had started to walk up town from his home. He states that he was "struck" in the stomach and fell against a tree, then to the ground. He describes the pain as "torture", as a knife cutting back and forth. By sheer will power he made his way to his house in jackknife fashion.

Accompanying this intense pain of sudden onset, is a rigidity of the abdominal muscles. It is described as board-like. It is as striking and characteristic as the pain. This rigidity is entirely involuntary. It causes the abdomen to be retracted. There is a tenseness of the whole body, particularly the thorax. Respirations are shallow as if the diaphragm was holding itself rigid. One of these patients described a sensation over the shoulders, as if heavy weights were hung by his suspenders. This was probably due to irritation of the diaphragmatic peritoneum—as is the case with free blood in the abdomen following traumatic rupture of a viscus.

Tenderness to pressure is marked, and becomes more general as time elapses.

Leucocytosis is present. Its increase is in proportion to the time elapsed after rupture. One patient had a leucocytosis of 18,000 five hours following rupture; another 18,400 ten hours later, and the third 14,000 after four and one-half hours. Soon after rupture, there is no elevation of temperature. The pulse remains comparatively slow, as does the respiration. As peritoneal reaction occurs, all will be found elevated.

Roger T. Vaughan has described a cycle shaped shadow between the diaphragm and liver when these patients are radiographed.

Vomiting and distention are not early symptoms.

The pathology of this condition is essentially that of an opening through the wall of the stomach or duodenum, surrounded by inflammatory tissue and a developing peritonitis.

Acute ruptured ulcers of the stomach may be confused with any acute abdominal condition, but especially with:

1. Angina pectoris. One of these patients was sixty-five years old. He complained markedly of a discomfort in his left chest and left shoulder. With dilated temporal vessels and an apparent arteriosclerosis his condition was considered an angina for a few hours.
2. Acute appendicitis—especially if gastric contents have traveled lateral to the ascending colon down to the caecum.
3. Traumatically ruptured liver, kidney or spleen—but the history should rule these out.

The treatment of this condition is surgical. Temporizing should not be considered. Hunt quoting W. J. Mayo, divides peritonitis into these three divisions:

1. Stage of contamination.
2. Stage of reaction.
3. Stage of progressive peritonitis.

I am certain that no patient with an acute ruptured gastric ulcer will tolerate delay in calling a physician. The proper time for operation is during the stage of peritoneal contamination or next best during the stage of reaction.

The operation consists essentially in closing the perforation, and draining. Some cases will not require drainage. Some men advise an excision of the ulcer margin sufficient to render the wound pliable for suturing. Others advise merely closure as by a purse string. One of our perforations had been neatly closed by the omentum, so that only a drain was placed in the pelvis. Should there be a possibility of pyloric obstruction—posterior gastroenterostomy might be indicated. Hertzler advises the simple closure for the average man. John B. Deaver insists that all cases

should have an added gastroenterostomy. G. Percival Mills, F.R.C.S., has pointed out that drains from the point of rupture—and those between the stomach and liver favor fistula and subphrenic abscess formation.

Post-operative treatment is important. These patients should be treated as though their ulcers had not ruptured. By modifying the diet to include milk and cream and the giving of alkalies.

Eusterman of the Mayo Clinic emphasizes the harmful effect of tobacco upon the healing of gastric ulcers. He states that nicotine paralyzes the sympathetic, thus allowing un-opposed vagal action.

Conclusion

The patient with an acute ruptured gastric ulcer is seen early—most frequently by the rank and file of the profession.

The symptoms are striking so that an early diagnosis is possible.

The one treatment is surgical, and to effect a cure, should be carried out early.

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THE RURAL PEDIATRICIAN

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Iowa has so far progressed in a state-wide health education program sponsored by several well organized and well financed agencies, that a comparison of your rural and city children would probably not yield the same striking differences found in states where rural health work is still in its pioneer stage. Having had the good fortune of working in pioneer rural health clinics in Colorado I have found the comparison of rural and urban children a fascinating study.

The periodic health examination now being urged for everyone has long been in vogue in the practice of the pediatrician. Much of his work has been the periodic examination of well babies and the giving of simple advice as to diet and hygiene. The rapid reduction in the rate of infant mortality of urban babies is eloquent testimony of the efficacy of such measures. There has not been a corresponding decrease in the infant mortality rate of rural babies. Nor does the health and nutrition of the rural school children compare favorably with those in city schools except where health education has been carried to rural districts by paid workers. Those of us who were reared in the city were taught to look with envy upon our rural cousin whose sturdy physique and out-of-door life assured him a better chance of success in life. Today we find more than 50 per cent of the children in certain rural communities to be seriously undernourished.

In the city there has been such a multiplicity of health activities, including infant welfare stations, preschool clinics, nutrition classes, etc., that some of the profession have feared the rapid approach of state medicine. When these same activities are carried to rural communities by federal and state aid, as by the Sheppard-Towner law this phobia of state medicine is apt to become a fixed idea. That a federal and state health education program is at present justified is admitted by anyone who studies the results of the work with an open mind. A real demand for some type of state medicine may yet come from the rural communities unless some of our medical students can be persuaded not to be specialists in the cities as soon as they finish their internships. A year ago, after a clinic in a small town in which there was no physician, a committee approached me with this plea, "Get us a physician and one hundred of our families will pay $25 each, per year." They cited a nearby town in which desperate townspeople had obtained medical help in this way. Is it not obvious that we must induce men to serve rural communities?

However, we must go further than this if we would meet the just demands of the rural community. We must have rural pediatricians. I am convinced that every physician in the small community should interest himself in the well baby, the pre-school child and the school child, just as much as does the city pediatrician. His obligation as a representative of preventive pediatrics is even greater because he is the only medical authority available. The term 'rural pediatrician" recently occurred to me when I met such a man in a small mining town in Colorado. He was the only physician in the community and much of his work consisted of traumatic surgery for the miners. He had to do nearly everything and his working hours were long and arduous. Nevertheless, he helped at the health conference and his findings were accurate. Mothers needed no advice as to feeding and weaning because they had been taking their babies to the doctor's office once a month for weighing and advice. An epidemic of diphtheria had been curtailed promptly by the use of toxin-antitoxin in the school. He had given intraperitoneal injections

for dehydrated babies with diarrhœa. He had taken short post-graduate courses in pediatrics and at present is taking such a course together with work in traumatic surgery. This doctor is the town's most respected, best beloved and incidentally wealthiest citizen and he is a rural pediatrician of the highest calibre.

Let us consider some of the urgent indications and golden opportunities for the practice of the rural pediatrician. It has been shown that the mortality and morbidity of rural babies is higher than that of city babies and that the nutrition of the rural infant is usually inferior. Lack of intelligent supervision accounts for these findings. The rural home is the last stronghold of those age-old traditions which are the bane of the pediatrician's life. The baby must be nursed whenever it cries. It must wear woolen shirts and flannel petticoats and "teething" bands until it is safely past its second summer. It must not be taken out of doors for its nap in the winter months nor bathed when it has a cold. Every fever is a teething fever; every rash a teething rash, and every convulsion a teething spasm. Truly, is it not remarkable that the rural baby survives its second summer? However, I am convinced by the avidity with which rural mothers seek intelligent instruction that the family physician might have overthrown the dangerous traditions and instituted sane methods of feeding and hygiene had he been sufficiently interested in preventive pediatrics. The fact that the incidence of maternal nursing varies greatly in different communities is evidence of the relative vigilance and intelligence of the communities' medical advisors. To keep a baby at the breast and well is a greater victory for the rural pediatrician than bringing a bottle baby safely through an attack of summer diarrhœa. To prevent rickets by sunbaths and taking a nap out of doors in the winter is more rational if not more spectacular than the cure of rickets by cod liver oil or quartz lamp. The administration of orange juice at two months, cereal at six months, and vegetables at nine months and gradual weaning at ten to twelve months, requires regular supervision of the baby, insures a solid, well-nourished year old child and parents who are as proud of their rural pediatrician as they are of their baby. Not much missionary work is required to institute this sort of periodic health examination. Usually the giving of a definite office appointment or mailing of a post card will start the program and envious neighbors whose babies are not doing so well will make the doctor's office a health clinic in due time.

The pre-school age, so aptly termed "the neglected age", offers many opportunities to the rural pediatrician. It is in these years, from two to six, that serious physical defects often have their inception. When the family doctor sees his three year old patient with an attack of measles or scarlet fever a few remarks about small-pox vaccination and toxin-antitoxin will be well received by the anxious parents. If the dangerous sequellæ of upper respiratory infections are explained, a child with otitis, adenitis or mouth-breathing will not have to wait too long for the tonsil-adenoid operation. In rural communities we have found from 25 per cent to 40 per cent of the children in need of the tonsil-adenoid operation, whereas in the city the percentage is invariably lower. The care of the deciduous teeth of the rural run-about child is usually neglected with serious harm to the child. It is the function of the rural pediatrician to urge parents to take their children to a dentist twice a year.

One of the most important contributions the rural physician may make is the correction of faulty food habits. The two year old child is apt to be receiving a farm breakfast consisting of hot cakes, biscuits, sausage and fried eggs, instead of milk, cereal, toast and fruit. In dairy communities we frequently find little milk drinking among the children. The cream is sold and skim milk given to the hogs and children. One farmer remarked that his children had no milk because he didn't even have enough for his hogs. There are many other suggestions of inestimable value to the rural home such as an explanation of the necessity of the afternoon nap for the pre-school child; the dangers of excessive candy eating and piecing; the significance and treatment of tantrums and breathholding. The mental hygiene of the pre-school child is just as important as his first year feeding but unfortunately receives very little attention.

The rural pediatrician may have opportunity to be of great service to the school child in ways much more valuable than the prescribing of calomel, castor oil or quinine. The observation of blepharitis, injected conjunctiva, or styes should be the occasion for a careful refraction under atropine, even though the parents are required to go considerable distance to obtain this service. Night terrors, grinding of the teeth and the hundred and one nervous manifestations which the laity like to attribute to "worms", may require only an adjustment of the school program, the substitution of a warm for a cold noon lunch, or a rest after school instead of chores. Overfatigue is more common in rural than city children and its prevention requires eternal vigilance. The rural pediatrician may prevent many a case of

chorea by timely observations and tactful advice, but he is almost helpless in the treatment of a case of chorea or preventing its complications.

Only a few of the functions of the rural pediatrician have been mentioned but enough to show that there is a great field of opportunities for the rural physician. Where no health program for children has been initiated in the community his work is at once most needed and most difficult. Where health clinics have aroused public interest the work is easier and in fact the laity in rural districts are demanding physicians' interest in the well child. In the future no young physician should contemplate serving a rural community unless he has an intelligent, sympathetic interest in children whether they be sick or well. But little special training is required and this will be amply and speedily repaid by a large office practice.

CARDIO-RENAL-VASCULAR DISEASE*

E. W. Wilson, M.D., Rolfe

Reliable statistics inform us, that death from heart disease, kidney disease, and cerebral hemorrhage is far in excess of that from any other cause.

In order to obtain a clear and comprehensive view of this condition, it should be studied as one group; because heart disease, kidney disease, arteriosclerosis, and high blood-pressure, seldom occur alone and frequently are due to the same cause.

An outstanding fact, is, that the renal-circulatory disorders are the greatest problem of medicine at the present time.

Every person, who has reached maturity, has a considerable chance of developing, at least, one of them; if not himself, he is practically sure to lose some relative or friend from this cause.

It is hardly possible that you can pick up one of our great daily newspapers and look it over without seeing a notice of some more or less prominent citizen, whose life was terminated suddenly by some of these diseases or their combination. When you read these notices, you know that he belonged in the renal vascular group, and you also know that it is usually an unnecessary death; that even though he had this affliction, he could have lived the allotted three score and ten and then died of old age.

The person who goes about your town dragging a foot, because of a cerebral hemorrhage, is no less a challenge to the medical profession than is the case of scarlet fever which we quarantine so rigorously, because one is inviting the other and neither should be permitted.

The cause of the cardio-renal-vascular group is, for the purpose of study, divided into two classes—direct and predisposing.

Among the direct causes, the primary offender is believed to be infection.

In youth, at the very beginning of growth and development, you have been compelled to undergo a series of violent infections, known as the diseases of childhood. Any one of these diseases are sufficient to lay the foundation for the cardio-renal-vascular group later in life, especially when we are undergoing the series of focal infections of middle life, due to decayed teeth, infected tonsils, pyorrhea, sinus infection, etc. The absorption of pus from such foci, year after year, ranks among the leading causes of renal vascular troubles, especially when engrafted on the injuries suffered from the diseases of childhood.

Under the subject of predisposing causes are heredity, age and diet.

In heredity we have an element with which we must reckon in all questions pertaining to our physical welfare.

What is heredity? It is an inherited vulnerability of certain organs, pangenesis of ancestors, good or bad. You have families whose histories reveal in their ancestors diabetes, others nephritis in generation after generation followed by hypertension and paralysis. These people's progeny need constant supervision to prevent calamities befalling them as did their ancestors.

Age is not a real cause of disease which naturally fall into this group. There is no natural rise of blood-pressure beyond the age of maturity. Abnormalities of blood-pressure are the least common among the young, but increase sharply toward middle life and become more numerous with advancing years, which means that the organs at and after middle life are less able to compensate for the effects of injuries received previously.

Diet as a predisposing cause is given various estimates. Insofar as cardio-renal-vascular diseases are concerned, I believe that we must concede that they are not caused by diet, under ordinary conditions in an otherwise healthy cardio-renal-vascular system. However, in taking this position, we must always keep in mind the fact that infection, heredity and age render the renal vascular system susceptible to functional overstrain by overindulgence in food.

Clearness of our outline and comprehension of this complex disturbance is obtained by studying

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the three chief manifestations separately, they are: nitrogen retention, edema and hypertension.

Our chief difficulty in doing so is that you seldom or ever find one of these cardinal symptoms alone, and in its pure form, but in a combination with the others and sharing common symptoms.

First, what are we to understand by nitrogen retention? In order to understand this we are compelled to study foods, which we find divided naturally into three great classes: protein, fats and carbohydrates.

Protein is a substance which forms the chief part of many of our body fluids and is essential to all living cells. This protein food is decomposed in the process of metabolism, into nitrogenous waste of many kinds of end products, some of which are: urea, uric acid, creatinin, etc.

It is the specific function of the kidneys to rid the human economy of these end products, and the kidneys are practically unaided in this function. So, when the kidney function of excretion is impaired by infection, or otherwise, this nitrogen, which is the end product of protein metabolism, is retained in the tissues, and this is regarded as one of the most specific evidences of kidney disease.

These nitrogenous wastes are toxic and when they accumulate beyond a certain point of tolerance they cause a fatal poisoning, which we have termed uremia, which is one of the most difficult problems of medicine today.

By what evidence are we to know the presence of or approach of this nitrogen retention?

We can get a much clearer conception of this problem by arbitrarily dividing it into the mild and severe grades.

In studying the mild grades I am taking the liberty of making a statement of which I have no statistical evidence, but in the main I believe it to be true, and it is this: Any physician in active practice, has had within the past week cases of mild nitrogen retention. I wish you to keep in mind that it is the most specific evidence of renal disease.

By what specific signs am I able to distinguish this condition?

It must be realized that we are dealing with a chronic intoxication, which may evade your search or detection by its mildness of symptoms, unless you are on the alert. You gather from the patient's statements, which are more or less indefinite, that there is an intoxication. You observe the peculiar unnatural pallor of the skin, this is caused by a contraction or obliteration of the small arteries and capillaries, and just here is considerable of the pathology of the disease; because the capillary system of the skin, viscera and brain are everywhere involved. This patient has a chronic toxic headache, due to toxic nitrogenous waste, which failed of excretion. You observe mental slowness and dullness, which is of toxic origin. There is indigestion due to capillary damage by toxemia. They all complain of being tired, sore muscles and lameness, because of protein metabolism which should have been eliminated by the kidneys in a normal condition.

This patient will live a semi-invalid existence for many years, unless taken out of this life by some terminal infection, such as pneumonia or other septic infection.

This is the patient whom we are neglecting, they get a bottle of medicine and are dismissed to continue a mere existence. This is the kind of a patient whose condition should be thoroughly examined to find out their real defects, because we can do them great good. They are patient, humble, submissive and ideal patients for treatment. If properly treated, which is simple, they will enjoy life and die of old age instead of a cardio-renal-vascular disease.

The severe grades of nitrogen retention are more a severity than a difference. Added to the mild form the severe has excitation, nervousness, restlessness and finally coma.

Blood-pressure is commonly elevated in nephritis but it bears no relation to the level of blood nitrogen.

Finally, if not satisfied with your diagnosis from your own powers of observation, a blood analysis will confirm your suspicion by showing an abnormal increase of urea, uric acid and creatinin and intermediary compounds. However, I believe the diagnosis can scarcely be missed, by a close observer, whose interpretation of visible symptoms is correct.

Edema, the second cardinal symptom, has been recognized for many years. By edema, we mean an abnormal secretion of serous fluid anywhere in the body, due to either a chemical or mechanical cause.

For the sake of clearness it is well to divide edema into three classes: metabolic, cardiac or circulatory and renal.

Under the term metabolic, we had for instance, persons during the late war who were compelled to live on an unbalanced ration, which was deficient in fats and carbohydrates and they developed an edema, which is termed metabolic or chemical edema.

In severe cardiac lesions we find another edema. The real cause of this edema is mechanical, yet a metabolic or chemical factor follows, in the impaired or altered permability of capil-

laries due to impaired nutrition of their epithelium.

Renal edema, strange as it may seem, is not due to the imperviousness of the kidney to water. Increase of the total volume due to dilution with water is relatively uncommon. Large accumulations of renal edema are more often accompanied by a concentration of the blood volume, because of the slight decrease of the plasma volume.

Edema of the renal-vascular type is more easily comprehended by studying it in two classes: edema due to heart failure and the strictly renal type.

That due to heart failure occurs in the renal-vascular cases of long standing and is the evidence of gradual continuous failure of the cardiac muscle.

The strictly renal type of edema varies greatly from slight puffiness to the huge type that breaks the skin.

Edema exists when the circulation through the kidneys and their specific ability to excrete water are not adequate. The reason the water is not excreted is because it lies in the tissue spaces and is not absorbed therefrom, therefore it is not made available to the kidney for excretion. Then, the real cause of edema is referred further back to the deeper question, as to why free fluid should thus accumulate in the tissues. Here we have arrived at a point in question that has not been settled to the satisfaction of every one concerned, but the evidence of an injury to the capillary functions seems convincing.

The explanation of edema rests in one or both of two agencies: first, the permeability of the capillaries must have been rendered abnormal.

The adjustment of this delicately balanced fluid equilibrium, between blood and tissues is not fully understood, yet, we do know that the injury to the capillary function of this adjustment is evidently the seat of injury which expresses itself in a disturbance of the water and salt balance.

Second, the changes in the composition of the blood, especially an impoverishment of protein, possibly due to a reduced ability of the binding of water by protein, involves a reduced ability of the blood to retain its water, with an increased tendency of this water to pass into the tissue spaces.

Through both these agencies, renal edema becomes linked with other forms of metabolic edema.

The damage of the peripheral capillaries resulted, either primarily from the same infection as the renal injuries and is a part of the same disease, or secondarily from the toxic action of retained substances or other indirect influences of the same renal lesion.

Invisible edema, as described by Widal, some years ago, is a condition of great importance and should be more generally appreciated than it is. In every suspected case, extreme care should be exercised to discover its presence. The patient who comes to you for a defect which they are unable to account for should have your honest endeavors, in any case.

If this patient has what is generally regarded as an unusually healthy appearance, a plump soft silky skin, slightly protruding eyeballs, shortness of breath on exertion, a sensation of fullness in the chest or abdomen, or as patients frequently term it "logginess" of the body, this patient should have your most careful attention for invisible edema. If this patient habitually arises at night to urinate, you have climbed another rung in the ladder of suspicion. Why? Because normal individuals pass a greater volume of urine during the day time than they do during the night, for the reason that eating and drinking are done chiefly by day and the greater part of the fluid is absorbed and excreted during the day. The invisible edema patient does likewise, except the excreting of the fluid is delayed by the disturbed fluid equilibrium of the blood and tissues, and remains until a more favorable time and state of circulation in bed at night, which permits it to be taken up by the tissues and presented by the blood to the kidneys for excretion.

This patient is very apt to have impaired function of almost any organ of the body, such as indigestion, because of edema of the digestive viscera; headache, because of impeded circulation of the blood in the brain, caused by edema.

This patient has very little resistance to infectious processes and frequently is a victim of pneumonia, because the edematous lung tissues are a fertile field for the cultivation of the pneumococcus.

This edema can not be regarded as a disease but should be looked upon as only one of the prominent conditions or elements of cardio-renal-vascular disease, nevertheless a very dangerous condition, not easy to discover but which we are able to relieve to a considerable degree, once we have learned its deceptiveness.

These are a few of the reasons why we read in our papers of so many people apparently well suddenly dying at their work.

Hypertension, the third cardinal symptom of renal-vascular disease, is the elevation of either or both the systolic or diastolic blood-pressure above normal.

The normal blood-pressure varies with age, sex, and other conditions which we can not take time to discuss.

The establishing of a normal blood-pressure is therefore a more or less arbitrary act. Some good authorities regard a systolic pressure above 140 mm. Hg. as abnormal at any time of life. This arbitrary estimate has been arrived at after much observation and I am unwilling and unable to deny its accuracy. However, I am very willing to admit that I believe anyone who has a systolic pressure of 140 mm. Hg. is normal.

The diastolic pressure denotes the minimum pressure in the artery between the beats of the heart and ranges from 40 to 60 mm. Hg. below the systolic figure. A diastolic above 90 mm. Hg. should always be considered abnormal.

The systolic pressure must always be considered of great importance because of two reasons: first, it represents the maximum strain upon the arterial walls, and second, it represents the functional power of the cardiac muscle.

By representing the maximum strain upon the arterial walls, it is the force which breaks blood-vessels in the brain, causing paresis and paralysis, which must always be taken into account when dealing with patients who have hypertension, because this calamity is preventable.

The systolic pressure as representing the functional power of the heart explains many of the complaints of our patients who have low pressure as well as high, a subject of much interest.

When we begin the search for the cause of hypertension, we immediately arrive at a central fact which attracts our attention, that is: "Hypertension never exists with normal kidneys".

This being true, is it a prominent symptom of disease of the kidneys? We have heretofore learned that the systolic pressure represents the functional power of the heart and the maximum strain on the arterial walls. Mechanically, it is evident that the hypertension results from an increase of cardiac labor in the attempt to maintain the circulation against increased resistance. Then a heart which possesses functional power will sustain this high maximum strain against mechanical resistance somewhere in the circulation. A weak cardiac muscle will tire and become exhausted, resulting in unexpected deaths.

A peculiar trait of the hypertension patient who has a good cardiac muscle, is the fact that he feels better when at its highest point of pressure and continues to do so until a cerebral vessel breaks; this accident places the hypertension patient in a dangerous position at all times, he knows he is not perfectly well but reasons he is not sick enough to consult a physician.

When we know there is never a hypertension without diseased kidneys we are not to stop here, because we know that the kidneys alone cannot offer sufficient obstruction to cause this condition, so we seek elsewhere, and in doing so we find another element to be considered. Hypertension is not constant, there are extreme fluctuations, which indicate important functional elements.

The circulatory functional elements found in the kidneys, disturbed, are pre-sclerosis, vaso-constriction of small arteries, proliferation of capillary endothelium, and pressure of surrounding tissues upon capillaries.

These disturbed circulatory functional elements are also found elsewhere in the human economy, wherever small arteries and arterioles exist, so we must conclude that the kidney is only a small part of the functional disturbance of the circulation.

Pre-sclerosis is the first stage of sclerosis, and has been demonstrated repeatedly, not only in the kidney but in all small arteries and capillaries. This condition is constantly present with hypertension of long standing. It is a thickening of the walls of the smallest arteries by hyperplasia of the elastic layer of the intima.

Vaso-constriction is a contraction of the small arteries, in the sense of a pathological vaso-constriction, either continuous or intermittent, general or local.

This assumption helps us to account for the functional element in blood-pressure, the early elevation with acute nephritis, the marked liability to fluctuation, the well known influence of the nervous states upon hypertension is made comprehensible.

The primary toxic or infectious injury is strictly in the blood-vessels, not only of the kidney but elsewhere, and it is plausible that the exquisitely delicate vasomotor regulation should be disordered by such injury, so that the response becomes abnormal or excessive.

The proliferation of the endothelium indicates that constantly there is an abnormal condition in response to the chronic ischemia, and this proliferation narrows or obliterates the capillaries and tends to keep them in a state of chronic inflammation and contraction.

Granting a primary infection or toxic injury of the renal vascular system as the causation of hypertension and the hypertension as only an evidence of the injury, it becomes very evident that a removal of the irritant will modify or relieve this dangerous condition.

In the very beginning of this condition, infection was the primary cause of the injury which

left the renal vascular system in a condition of hypersensitiveness, which is continued by certain foods carried by the blood stream. This being true, it is obvious that the only remedy that can be of value in the treatment of such a condition is based on the proper kind of a diet for that particular individual.

The dietetic principle involved is to exclude from the body, as far as possible, the particular kinds of foods which might overtax the functional ability of any damaged organs.

In a case of pure nitrogen retention, a low protein diet would be indicated or in a chloride retention the chlorides should be prohibited.

Unfortunately for the physician the cases are mostly of a mixed type which necessitates a restriction of both chlorides and protein.

The diet need not be irksome to any patient, neither should they suffer from hunger. Over eating is a common fault, and most people enjoy the sensation of a diet normal in quantity.

The output of the chlorides and nitrogenous products is learned through quantitative analysis of the urine and blood. This requires some exacting but pleasant and interesting work which anyone may accomplish.

The number of these patients in a community are greater in number than most of us suspect, unless we are on the alert.

The good you can do these patients are beyond your wildest dreams and should be of great interest to you.

Failure of any of these cases should never be admitted unless the strictest diet has been continued for at least two months.

Because of their great importance, there are three points which we must emphasize:

First, satisfactory results can be expected only from accurate and persistent treatment, preferably under laboratory control. Lax and haphazard methods have been the commonest cause of failures heretofore. No one has experience upon which to base criticism unless he can prove that the sodium chloride in the urine has been kept below 0.5 gm. during a sufficient period of time.

Second, in the successfully treated cases the progressiveness seems to be halted. In other words, a good result once obtained is permanent, barring violations of diet, infections and accidental complications. When the control of hypertension or edema is less complete, probably the strictest diet still arrests the progressiveness to a greater or less extent.

Third, results in the severest cases may be the most convincing, but they can never be the best results. The ideal can only be attained by beginning treatment in the earliest and mildest stages. There is then good hope of preventing the severe stage and nearly all of its long list of complications. For this reason, any advice that hypertension should be ignored, or should be treated only with rest or other palliatives is pernicious and should be opposed as emphatically as the similar erroneous advice which formerly was so often given for diabetes.

SESPE SNAPS AND SNATCHES

John William Shuman, M.D., Los Angeles, California

Dr. Charles Stephen James gave a birthday party (week-end of May 22 and 23, 1926) for his brother, Major L. Douglas James of Fairfield, Iowa. The party included banker George Tyler, dentist Herschel Glick and the scribe. It was a trout-fishing party on the Sespe river, twelve miles back of Wheeler's Hot Springs, in the Ojia Valley (Garden of Allah) of California.

Leaving Los Angeles at 4:00 a. m. on the twenty-second (L.D.'s birthday), per auto, we had coffee at San Fernando, breakfast at Ojia and 9:30 saw the participants in saddles (see photo of "Our-Gang" on the best massage-machine in the world). Dinner was at 2:00 p. m. in Lathrop Camp (see figure 2). Sixteen rainbow trout were caught for supper! Sure we had rattlesnake-bite-medicine along.

Some wag has said, "Mountains are made to look at—God never intended them to be traveled on or He'd have made them flat—and I am not going to fly in the face of Providence".

A minister, sending a post-card home after seeing the Grand Canyon, wrote, "Have just seen the signature of God written across the universe". His son Dick wrote to his boy pal, "Have just seen a place where I could spit a mile". All of which goes to help describe that trail up to the Sespe's pools and rapids. Prior to this ride each member's tongue ran so fast that it seemed that the owner had been vaccinated with a phonograph needle; but silence reigned supreme as far as conversation was concerned the higher we went, and the narrower and more thrilling became that long-winding-trail (see figure 3). On one particular hairpin turn L. D. James was heard to give ardent utterance as follows: "Mule, don't fail me now! ! !" When L. D. spit he didn't try "spitting a mile", but always expectorated on the high side, that is, taking no chance

FIGURE 1. L. James, C. James, Shuman, Glick and Tyler just leaving the horse-corral for the Upper Sespe.

on falling outward. It is a fact that one pound of horse-shoe tobacco was used up by L. D. on the trip over the divide.

There was a profusion of wild flowers, among which the tall and beautiful blooming yaccas ("Candles of the Lord") towered. The strong odor of sage dominated the fragrant air. Such amphibians as lizards and horned-toads were numerous on rocks, sand and shale, while many colored birds were everywhere in the trees and bushes. One old mamma mountain quail scuttled out of her nest in great (assumed) distress. The nest was in the sand just by the trail under a little sage bush and contained twelve eggs. The male of this house sat on a bush a short way off calmly watching the situation—but perfectly useless. Needless to say the nest was not disturbed.

To the initiated the trout were "normal". That is to say, wary, wise and well fed. They were curious to see what new-fangled bait these city-dudes had brought out to entertain them with and did not hesitate to be gentlemen when it came to giving their attention; but when it came to biting, striking and being hooked, they politely but firmly refused ninety times out of a hundred.

The artificial flies only fooled two; the little finger-nail sized silver-brass-spinner picked out eight; but good old reliable red-salmon-eggs

FIGURE 2. "Our-Gang" arrives at Lathrop waiting for the Chink, Lee Chow, to sound "Mess call".

FIGURE 3. Homeward on the down grade trail. The side-slip in the saddle is intentional—for ease and comfort.

hooked the most; and last but not least trout always did, do, and always will, like fish-(angle) worms. This deals with truth and not fiction. All of we fishermen like to get the credit of catching our trout on "flies"; but when it comes to taking home the meat for wife and kids to eat, we will stoop low—even to clubbing a trout over the head, for example, using an egg or worm.

The limit in this state is twenty-five per diem. Five of us got exactly thirty fishes the morning of the twenty-third and are not at all bashful

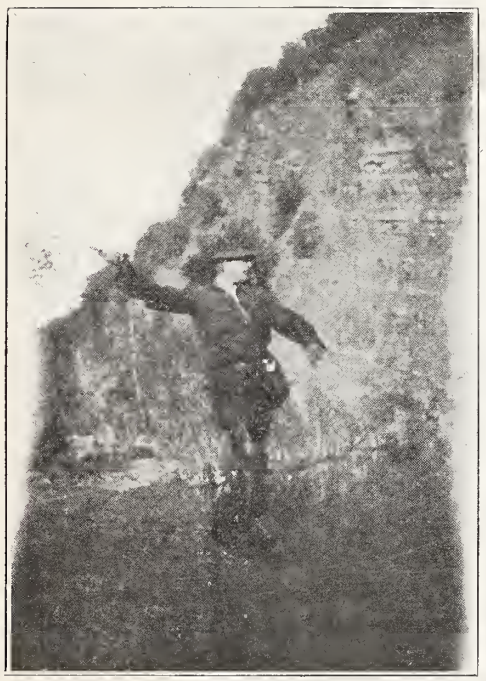


Figure 4. C. S. James assumes Grecian-Javelin-throwing-form for casting a Brown-Hackle-fly.

about it—hence this screed. Trout fishing, like golf, is not easy, that is why men get a real kick out of doing it.

To most human beings today, "The great open spaces" is but a phrase. But they do exist, and he who sojourns even for a brief time in the majestic silence of those grand places of distant views returns a better man!

Dr. L. D. returns to dear old Iowa thoroughly convinced that the state of his nativity affords many advantages over California in the fishing line, for example, bass fishing in Fairfield's "City Reservoir", and hooking "cat-fish" in the placid waters of the famous "Skunk river". He states that, "Iowa's fishing is without that rigorous mental and physical strain that one finds in California's narrow, perilous and lofty mountain trails, which must be traversed on a mule or horse, to whose intelligence the rider must trust explicity for safety in the pursuit of Izaak Walton's ancient loved piscatorial art.

However, he pledges, promises and vows to return to southern California for the season of duck shooting as he understands that that is done on the lowlands, either on foot, in boat, or by automobile—and not using donkeys as a means of transportation!

2007 Wilshire Blvd.

RECORD OF FIRST AUTOPSY FOUND

A record of the first postmortem examination done in America has just been made available by Dr. Ludvig Hektoen of the McCormick Institute for Infectious Diseases in Chicago. An account of this is given in the April Hygeia.

In 1533 Siamese twins were born in San Domingo. They were unusual in that while there were two heads, there were only two legs and two arms. Death occurred after eight days, and a post-mortem examination was made by a surgeon named Johan Camacho, to discover whether the single body involved two souls, as the religious question was important at that time. It was found that there were two complete sets of organs in the single body. Therefore, it was decided that two persons were concerned, and the child was baptized as Johanna and Melchiora.

ENERGY DERIVED FROM FOOD AND STIMULATION

The call for energy is felt by all, whether it is needed to carry on the simple routine work and responsibilities of the day, or to achieve great results in some special field. Energy does not come from without, states Dr. Jesse F. Williams of Columbia University in the April Hygeia. There are but two sources of energy, notwithstanding the claims made by many to furnish it.

One source is food. Chemical action in the body changes the food into compounds that yield energy. The amount of energy procured from the same amounts and kinds of foods differs with different persons. It was in recognition of this that people were formerly classed in types named according to the energy they showed.

However, other sources of energy are apparent in persons acting under great emotional strain. This explains the vast amount displayed by dancing Dervishes. There is in the body a certain arrangement of nerves and glands that makes one respond with unusual energy to certain emotions or situations. But some people have very little of this energy response.

One should seek inspiration from great books, stimulating friendships, music and other sources. Then one will have abundant energy to meet the various situations in life and to realize one's ambitions of achievement.

DR. WILBUR SCOTT CONKLING

OBITUARY

By David S. Fairchild, M.D.

Dr. Wilbur Scott Conkling died at his home, 1003 Pennsylvania avenue, Des Moines, Friday, June 11, 1926, from tuberculosis of the pleura. Dr. Conkling was born September 17, 1873, in Henry county, Iowa. He received his preliminary education in the public schools of Mount Pleasant, Iowa, Howes Academy and the Iowa Wesleyan University, after which he took a business course in Highland Park College, Des Moines, graduated in pharmacy from Drake University, March 17, 1895, and from the medical department, Drake University, March 17, 1897.

Immediately after graduating in medicine Dr. Conkling located in the city of Des Moines where he continued to practice until failing health compelled him to retire, except during important periods while in the service of his country; as will be related. (The services referred to and the training and preparation for it demand a separate chapter.)

Dr. Conkling was just fairly establishing himself in practice when the call came for Foreign Service in the Spanish American War in 1898. After an absence of a little more than a year he returned to his practice with additional prestige and experience. The devoted service rendered during a trying period with men and officers from his own community gave him a high place in their estimation. Such opportunities rarely fall to a young doctor but Dr. Conkling had the ability and high qualities of conscientious manhood, to meet, without failure, the trying duties falling upon him in an active military campaign under difficulties of an unusual character.

Dr. Conkling felt that the widest and most useful field of practice was that of the general practice of medicine and surgery, in which he hoped to excell. He made no special claims but followed boldly and without fear the opportunities that opened to him. He very soon gained the confidence of the public and of his fellow physicians. No one had reason to doubt his honor or sincerity. He soon became an active member of the Polk County Medical Society, held its highest offices, and was almost constantly a member of important committees. While a man of decided and independent views, he never gave lasting offense. If he found himself in the wrong, or partly so, he was able to change or compromise to meet the essential requirements of the case. In the State Medical Society he was a constant and useful member, and frequently attended the sessions of the American Medical Association. Dr. Conkling was a devoted member of the Military Medical Association. His work in medical societies constantly widened his mental vision and extended his acquaintance with men and affairs. He was a loyal supporter of the Medical School from which he graduated and in 1903 when the writer succeeded Dr. Schooler as Dean of the Medical Department, Dr. Conkling was made assistant in surgical and dispensary clinics which continued until 1909. His practice continued to grow and became quite exacting, but he found time to accept an election on the school board, upon which he served several years.

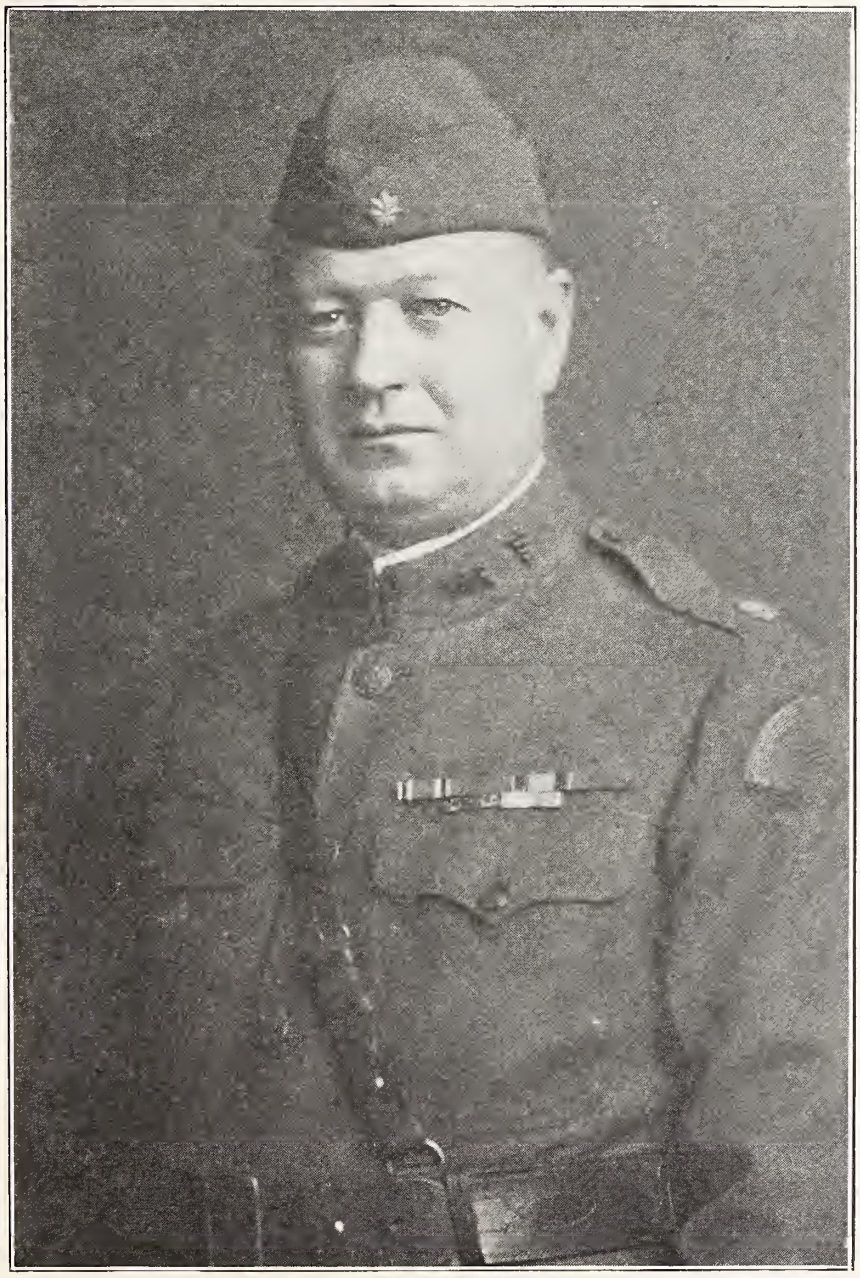
In 1916, when our difficulties with Mexico became so acute as to demand a mobilization of troops on the Mexican Border and later in the World War, Dr. Conkling without hesitation, and without regard to personal sacrifice, at once placed himself in the line of duty. When the war was over and he returned to private practice he accepted duty in the Health Service for which his knowledge and experience so well fitted him.

For the past two years, it is sad to say, that his friends and closest associates began to see a loss of vigor and mental elasticity and that he was not quite the Dr. Conkling of former years, but only to those closest to him was it apparent that the exposure, hardships and responsibilities of high official duties had undermined his constitution and in a year a fatal tuberculosis was rapidly advancing. The involvement of the left chest, the pleura and heart caused great suffering, which he bore with great fortitude. His wife, whom he married August 14, 1901, was his constant and devoted attendant and never for a moment relaxed in her watchful care.

Dr. Conkling is survived by his wife and three children, Ellis W. Conkling, Wilbur S. Conkling, Jr., and Frances Isabel Conkling.

ADDRESSES OF APPRECIATION OF DR. WILBUR S. CONKLING

At the September meeting of the Polk County Medical Society, the entire evening was devoted to a Memorial Program for Dr. Conkling, the speakers being Dr. D. S. Fairchild, Dr. Lewis Schooler, Dr. Frank L. Williams, Dr. Mathew A. Tinley and Dr. Walter L. Bierring. Their addresses admirably bespeak the high esteem held for Dr. Conkling by the physicians of his acquaintance, and it seems fitting that they be reproduced here in full.



DR. WILBUR SCOTT CONKLING

DR. WILBUR S. CONKLING

By Lewis Schooler, M.D.

In the passing of Dr. Wilbur S. Conkling, the medical profession of Des Moines and the State of Iowa, has lost one of the most prominent and capable physicians and surgeons.

Dr. Conkling graduated in pharmacy and later in medicine, just before the breaking out of the Spanish American War. He had been for some years a hospital steward in the Iowa National Guard, and in that capacity, went with his regiment to the front, and while serving in that capacity in the Philippines was commissioned assistant surgeon. that being the time when his medical ability became known. Upon his return home he resumed his former practice in Des Moines and soon built up a large and profitable business. From this time to the beginning of the World War and our participation in that conflict, except for the period in which he served on the border, his practice continued to increase and his reputation began to spread beyond the limits of his home city.

Aside from his deep learning and his upright bearing and genial disposition he became one of the leading members of the profession and his presence in the sick room was an inspiration and few men were more endeared and loved by his clientele than was Dr. Conkling. He was one of the few men able to hold his families—a quality seldom possessed by young physicians.

He will be long remembered and his memory cherished by those he so faithfully served. The poor received the same assistance and helpful attention as the more wealthy and to them was extended the same sympathy as that to his most intimate friends. His services were rendered to the destitute as uncomplainingly as though his reward was ample and certain.

He was a man possessed of excellent social qualities, a fine physique and apparently a healthy and strong constitution and seemingly one who might have been expected to lead a long and useful life, but owing to the uncertainty of human life he was stricken down in the midst of his useful and prominent career.

In his association with the other members of the profession he was always pleasant and agreeable. He assumed no superiority, was not contentious, having due respect for the opinions of others and expecting the same for his own, having only in mind the welfare of the patient. While like many others he lived by his labors he was not exorbitant in his demands, commercialism was not a part of his disposition.

The same probity of character and devotion to duty is testified to by his comrades in the army—always sacrificing his time and endangering his life and health in caring for the sick and wounded under his care always demanding as the first consideration, the welfare of his men to whom he was sincerely devoted the same as though they were his private patients.

Had he remained in private practice he would have been one of the eminent men of the profession in his city and state, but feeling that it was his duty to serve his country and its defenders he relinquished all the opportunities of civil life, not for glory but from an impelling sense of duty to his state and nation. Such a life as Dr. Conkling's is worthy of emulation by all true physicians as well as all true American patriots. He was the only man of my acquaintance who opened the chest and grasped the heart and successfully resuscitated an apparently dead man on the operating table.

His life work is finished—he is mourned not only by his family but by all to whom he ministered as a practical and scientific physician and brethren of the medical profession.

DR. CONKLING IN FRANCE

By Frank L. Williams, M.D.

I am indeed indebted for the honor of talking to you for a few minutes about our late good friend, Dr. Conkling. It is very interesting and pleasant to reminisce regarding my associations with Dr. Conkling for they were always moments of inspiration as well as pleasantness. I am sure this generous audience will pardon me if I digress for a moment to mention some of his many wonderful personal attributes. His energy which was terrific, and almost explosive, the eagerness, the earnestness and enthusiasm that the Doctor always had for the subject at hand could engender nothing less in those whom he contacted.

His highmindedness, truthfulness, honesty and courageness coupled with understanding and farsightedness, was always an inspiration to officers and men alike who were around him, for he was matchless, unrivaled, inimitable, incomparable in devotion, loyalty and sincerity, courteousness, fairness and steadfastness to either man or cause—often times to his own personal detriment.

My first acquaintance with the Doctor was in May, 1917, when I accompanied another officer to his office. He at that time indicated that he was short an officer in his detachment, and in

his characteristic manner informed me that he would have my application on the road to Washington that day; this was accomplished and my commission came through within a short time.

Dr. Conkling was always very earnest in his work; during the mobilization period at the fair grounds at Des Moines, while the regiment was in training, he spent many hours overtime and always insisted that other officers do likewise, in training the medical men of the detachment in the fundamentals which it is required that they know.

Throughout all of my associations with Dr. Conkling, he was a tireless worker, never taking anything for granted until he saw it was done, or else did it himself. I do not believe that anyone has ever realized Doctor Conkling's ability for organization and administrative work, because he was never tried to his complete capacity. At Chatteau-Thierry in July, 1918, Dr. Conkling had been in charge of Field Hospitals, later come to command the Sanitary Train. The evacuation of the wounded from the front lines at that time was a novel and a nearly new experience for officers of the American Army. As a matter of fact, it was practically pioneer work, but the manner in which Dr. Conkling jumped into this service and organized his ambulance companies in a manner that they would completely care for all wounded men in Divisional Sector with but very little trouble was truly a magnificent feat. Many dough-boys, not only in the Rainbow Division but in Divisions on each side of the Rainbow owe their early evacuation to the organization genius and guiding power of Dr. Conkling.

Dr. Conkling was ever watchful for the protection of those around him as the following incident will bear testimony. During the German offensive in Champagne on Chalonsur-Marne, a hospital being handled by Dr. Conkling was being terrifically shelled by the Germans, causing a number of casualties. Needless to say, the Doctor decided that all wounded should be evacuated; in evacuating this hospital, Dr. Conkling insisted that all nurses take shelter during fire and the Doctor stayed until the last wounded man was evacuated from the scene of action; I have always felt this was greatly to his credit; his staying until the last man had been removed, as he could readily and very easily have found other work to do which required his attention, probably more, due to the fact that everything was organized and everything being done that was possible, to expedite the evacuation of the wounded.

Being nearly a stranger to Dr. Conkling, prior to my commission, I was later to learn with what respect he was regarded by the medical officers of the Regular Army Corps. This I learned during the Chatteau-Thierry Defensive-Offensive from a Colonel of the Regular Corps who came up to inquire for Dr. Conkling. Inasmuch as I had had what would be called considerable war experience at that time fairly closely associated with Dr. Conkling, I was able to give this officer much information relative to the manner in which Colonel Conkling was handling the different problems encountered. After this discussion of several hours, the officer told me that if Dr. Conkling was handling the problems in the manner I had described, that it was good enough for him, then by way of explanation he informed me that they had always felt, in the Regular Corps, that Dr. Conkling's contributions toward the Medical Service of the Army were contributions of merit and that Dr. Conkling was credited with many procedures and many of the methods in vogue in the Medical Corps of the Regular establishment. This gave me an insight into the real standing and the bigness of the man with whom I had been serving.

Of all the work which the Doctor had been called on to perform, I believe however, that the march into Germany was the most trying task assigned to him; taking the field immediately after the armistice with men who were not too well clad or shod, men who had been by virtue of the war-fare just completed, used to irregular eating, sleeping on the ground and sleeping in fox-holes, were suddenly thrown into good billets in the northern France, Belgium and Germany itself. This naturally brought on many respiratory infections; then too, many men who had been suffering from slight conditions, but who had been standing up under the strains of active warfare now became casualties. This, with the army on the march, made the hospital problem extremely difficult. In addition to this, supplies were hard to obtain and many times the Doctor might ride all night to obtain gasoline, repairs for ambulances, medicine and other necessities to keep the organizations functioning. During this march Dr. Conkling's health was seriously jeopardized, as I have personal reasons to know as he at one time consulted me relative to himself, but in his explosive manner, he insisted that he could carry on, clear to Berlin if necessary.

During the march into Germany, Dr. Conkling conceived the idea of combining his four hospitals into two units; he would establish one of these units ahead of the organization and let it

remain there until the organization came up to it and passed, and at certain times in the march, evacuate the rear hospital and have it leap frog the hospital ahead and by the leap frog method, the march into Germany was made.

We arrived at Bad Neuenahr, Germany, a little town located on the river Ahr and at that place established the Divisional Hospital. It was at this site that Dr. Conkling got his first relaxation in the World War. The armistice had been signed some days before. We were settling in this beautiful German village for a period of occupation. It was during our stay at this place that Dr. Conkling was granted a leave, and during this leave he traveled through southern France, up into Belgium and came back and settled down and remained until the regiment left for home.

Personally, I have always found Dr. Conkling to be a veritable storehouse of information relative to medicine, politics and life itself, much of which was gained by him in the school of hard-knocks and personal experience. Always a great capacity for work and play. At handling the problems before him, he was fair, keen, ingenious, sensitive, suave; he was finished. He was charitable and generous to a pathetic and touching degree, with both thought and worldly goods —but withall a soldier, and I know of no higher or fitting tribute to render. In fact, it gives one a gripping at the throat even now to think of the passing of a friend of man, as was Conkling and, apropos of this are these few lines of Coleridge' "Dejection":

"A grief without a pang,
Void, dark and drear,
A dreary, stifled unimpassioned grief,
Which finds no natural out-let or relief,
In words, or sight, or tear."

LIEUTENANT COLONEL WILBUR SCOTT CONKLING AS A MILITARY SURGEON

By Mat A. Tinley, M.D.

I offer an apology for my seeming presumption in attempting to tell Wilbur Conkling's associates about him.

To know Colonel Conkling was an assurance that he would keep faith, make the good fight and get results. I wish to say to you members of this society you do well to thus congregate and show your appreciation for the services rendered and the honor brought to your community by Doctor Conkling. Whether, as a medical corps Sergeant, a Lieutenant, Major or Lieutenant Colonel, Doctor Conkling was ever active, virile and attentive to the welfare of those trusted to his care.

Duty assigned to him was never lightly received. Others might play, but never so with our friend until every responsibility was fulfilled. Ever serious, sober and sensitive, he was frequently not appreciated; never vindictive, but often hurt.

In the Philippines, as in camp or on the battlefields of France, he was working when others were resting. He devised means of fly-proofing latrines, screening kitchens and protecting food. It was ever a pleasure and satisfaction to have outside inspectors visit our camp. They always left with helpful hints for other units.

In the cheerless hours of combat, Wilbur devised shock chambers for the wounded, improvised heating arrangements and provided needed blankets to maintain the heat. With keen executive ability, he always delivered man power commensurate with the number of men in his command. Furthermore, they all acquired his energy to a greater or less degree.

He enlisted in the Iowa National Guard in the spring of 1898, and was immediately made hospital steward. While in the Philippines, he received his commission as first lieutenant, February 27, 1899, and served as such until muster-out of service November 2, 1899.

He re-enlisted in the Iowa National Guard and served as First Lieutenant until promoted Captain in 1895; was made Major in May, 1906. He was in federal service on the Mexican Border as Major from June 20, 1916 to February 27, 1917. He entered the World War with rank of Major October 5, 1917 and was promoted to Lieutenant Colonel March 3, 1918, serving as such until muster-out in May, 1919.

Again, back in the guard service, he served as State Surgeon until his death. His service was outstanding at all times and he received frequent words and letters of commendation. His name was presented for distinguished service, but like many others, the award failed to come through.

To live with an individual, is to know him and under the trying conditions of war service, this is especially true. In heat or cold, famine or plenty, hard service or at rest period, Doctor Conkling was always possessed of clear vision and a sane comprehension. During the rainy season in the Philippines, he prepared the means to aid men in avoiding the chill of night and the

heat of day. He safeguarded the bivouacs from pestilence. On the eve of a fight his request for litter bearers and his organization of the field for clearing the wounded was certain.

Here, I wish to compliment our profession in the army on their near perfect organization for combat. Considering the everchanging conditions to be met in combat, no system can be perfected to meet all conditions. In organization, medical units are flexible, making it possible to sub-divide and at all times, have an officer in command. The present plan, is, in a large measure, due to the untiring efforts of our civilian medical men like Colonel Conkling. Many a lad has trudged that last long mile because of a kindly word from Colonel Conkling. Eternity has lost its terrors for others prepared to meet their God and Maker by the cheery words of that kindly medical man. Home folks became reconciled to their loss when he demonstrated to them, out of the kindness of his heart, how wonderful was their contribution to our flag.

He responded to every call made throughout his life-time. How natural, then, his wife's remark, "Going again", as his body was borne reverently to its last bivouac.

In reviewing the military life of Colonel Conkling, I am reminded of the story told of the old practitioner in the Ozarks. Doctor Jones started practice in the hills where hookworm abounds and found much to do, his patients were poor, their lives drab, equaled only, by the soil with which they worked. He was there when they were born and he closed their eyes for the long journey. He shared their hours of joy and their hours of sadness. No one was ever turned away, no duty too exacting. Years of night riding, day and night vigil passed and Doctor Jones was unable financially to relocate.

Finally, the "Big Adventure" was before him and with bated breath the community waited for word of him. They laid him away on the hillside and then gathered to arrange for his headstone. So great were his services, and so limited their opportunities, they had difficulty in framing an epitaph. In sorrow, they looked to his office, their haven of comfort for many years, and read, "Dr. Jones, office upstairs".

That sign has since been wet with many tears and the countryside with bowed head and bended knee read and reflect. On Colonel Conkling we leaned with equal force and were never disappointed. Today we look to the windows of his "office upstairs".

Letters of Appreciation

Submitted by Dr. Walter L. Bierring, Des Moines

Doctor Conkling was particularly fortunate in the friendships formed along life's pathway, in winning the regard and esteem of his colleagues and the enduring love of the home folks.

In that great crucible, the World's War, where social station and personal wealth counted for naught, and only individual merit stood the test, it was the privilege of Doctor Conkling to gain the recognition and friendship of some of the great leaders in his profession, indicating that he had the elements of character which distinguished him among and above his fellows.

It seems fitting on this occasion to present several letters of appreciation from friends who learned to know him during the great emergency. That we may have an index of his thoughts during this trying period a few paragraphs are quoted from a personal letter of Doctor Conkling written July, 1918.

France, July 13, 1918.

Dear Doctor Bierring:

I have been intending to write you for a long time but somehow have never had the time to do so, but will make an effort to write you a short note this afternoon.

We are occupying with the French a very important position on the line and are expecting a big offensive hourly.

About a month ago I was appointed Director of the Field Hospitals for the 42nd Division and consequently left the old regiment, and I assure you that I felt it very much, having been with them for over twenty-two years, there being only three officers in the regiment that were members when I joined. The 168th Infantry is considered one of the very best regiments in France, and I am also very proud to tell you that the Rainbow Division is considered one of the very finest in France. I enjoy my work very much.

At the present time in addition to being Director of Field Hospitals, I am acting Commanding Officer of a 1500 bed evacuation hospital which is made up by combining two field hospitals with a mobile hospital unit. We have ten operating teams, a shock team, and have our hospital divided in three sections, surgical, medical and gas, and have also an excellent laboratory which would make the majority of civilian hospitals look cheap. We are especially prepared to take care of the 42nd Division. We were lucky in securing a vacant French hospital, but as it has not been used for some time we had plenty to do getting things organized.

You might be interested to know that Major Cannon of Boston is with us and was asking about

you yesterday. I informed him that I had been expecting to write you for some time, and will enclose a little note from him to you. I am also enclosing a list of the various officers, who go to make up this evacuation hospital.

Colonel Fairchild is making good as Division Surgeon and the officers who you know are also making good.

We are expecting one of the biggest offensives in this part that the Boche has ever attempted, and are hoping that we will be able to drive him back, inflicting severe punishment on him. There is very little news which I could write which you do not read in the daily press, as we know little of what is going on except what we hear and what is occurring in our immediate vicinity.

Personally, I am in excellent health and have stood the work as well as any youngster, but will certainly be glad when it is over and I can return to my family and friends, but we must all realize that this is a big game and that also this war is not won by a whole lot. We are going to win because we have to win.

Please remember me to all my friends.

Assuring you of my best wishes, I am,

Very truly yours,
Wilbur S. Conkling,
Major M.C., 42nd Division,
Director Field Hospitals.

It will be noted that all his concern is for others, with but little thought for himself.

Major Walter B. Cannon, referred to in the above letter, in civil life was and is present Professor of Physiology in Harvard University Medical School, and recognized as one of the leading physiologists of his time. The letter enclosed from his is as follows:

117th Sanitary Train,
Hospital Section.
July 13, 1918.

Dear Doctor Bierring:

I have just learned that our Commanding Officer, Major Conkling is writing you, and I gladly take this opportunity to send a word of greeting to you and Mrs. Bierring. About a week ago I was ordered here from the Central Laboratory, where I have been at work on problems associated with surgical shock, to take charge of shocked men in case there is activity in this sector. Trains and organizations from various places have been thrown together here, but the forcefulness, good sense, and good humor of Major Conkling have made order where there might have been much disorder and the best of spirits where there might have been dissatisfaction and complaining. I am very glad that the "fortunes of war" have given me the pleasure of knowing him.

It seems a long time since I left my family, fourteen months ago, but so long as I can be useful my place is here. Thank the Lord the Americans are coming in thousands now daily, and we shall win.

With kindest regards,

Yours sincerely,
Walter B. Cannon.

Three and one-half years later I witnessed the first meeting of Doctor Cannon and Doctor Conkling since the war, and it was easy to be seen that the bonds of friendships formed during the war period were maintained as strong as ever.

Doctor Conkling attended the Milwaukee meeting in October, 1924, of the Interstate Medical Assembly, and I was interested to note that practically during an entire day he was in the company of Dr. William Darrach, Professor of Surgery and Dean of the College of Physicians and Surgeons of Columbia University, New York, and I soon learned that they were renewing the friendship formed in France.

When Doctor Darrach learned of this memorial meeting he sent the following letter of tribute:

New York, August 23, 1926.

Dear Doctor Bierring:

I think that all of us who came in contact with Lieutenant Colonel Conkling always remember him as one of the hard-working, enthusiastic, unselfish members of the Medical Corps. He represented that fine type of National Guard medical officer who never forgot the fact that his uniform did not relieve him of his responsibilities as a physician. His main, dominating idea seemed to be the comfort and welfare of "his boys". Red tape, custom, tradition, regulations, time, his own physical exertion, counted for nothing if his boys needed anything which he could in any way supply. He often expressed these needs in forceful and picturesque language, and he always impressed. He won not only our admiration and respect, but our very deep affection, and we shall miss him very much.

Very sincerely yours,
William Darrach, M.D., Col. M.R.C.
(Formerly Asst. Surgical Consultant, First Army.)

Once Doctor Conkling told me this story of his first meeting with Colonel Darrach who was visiting Major Conkling's hospital as assistant consulting surgeon. Upon leaving Colonel Darrach asked, "Major Conkling, is there anything we can do for you?" "Well", answered the Major, "we do need some more field ambulances, but for God's sake don't send us any more damned consultants." Colonel Darrach, with a Scotch twinkle in his eye promptly replied,—"You go to hell" —saluted and turned to his waiting car.

Another friendship formed during this period was that of Dr. George E. Brewer, the eminent surgeon of New York City and Professor of Surgery in the College of Physicians and Surgeons,

Columbia University. He also sent a letter for this occasion.

New York City, August 27, 1926.

My Dear Doctor Bierring:

I am just in town for the day and I find your letter of August 20th.

I was deeply grieved to hear of the death of my friend Lieutenant Colonel W. S. Conkling, Medical Corps, United States Army, during the World War.

I was intimately associated with Doctor Conkling for ten months, and during that period there developed in me a growing appreciation of his patriotism, ability and sterling character. It was my privilege to see him under all conditions, in the training camp, at the front during a comparatively quiescent period, and also in the stress of battle, during the summer of 1918. The striking characteristics which I observed during those periods were: first, an overwhelming sense of responsibility in regard to the care of the sick and wounded under his charge; second, an extraordinary capacity for administrative detail and orderly arrangement of operating service during periods of intense military activity; and third, his reliability, integrity and fairness in all his dealings with his associates. I feel that the medical profession has lost a distinguished colleague, and the community in which he lived an honorable, high minded citizen.

Very truly yours,
George E. Brewer.

About three years ago Doctor Conkling attended a meeting in Chicago pertaining to his State Public Health duties. I was with General Ireland, the Surgeon General of the Army when I observed Doctor Conkling in the other part of the hall, and I spoke to the General saying that I would like to introduce a friend and fellowtownsman who was greatly interested in military medicine. "Sure", he answered, "take me to him". As we approached Doctor Conkling I noticed the General begin to smile, and then he called out—"Say Conkling, Bierring wants to introduce us, seems to me he is coming in on a freight because he should have started about twenty-five years ago." At the time of the funeral services General Ireland sent a message expressing his sympathy, and for this occasion he has kindly forwarded the following letter.

War Department,
Washington, D. C.,
August 25, 1926.

My Dear Doctor Bierring:

I understand that the Polk County Medical Society is arranging a memorial service for the late Colonel W. S. Conkling, Officers' Reserve Corps, Medical Section, and I consider it a great privilege to give my testimony to the worth of this very excellent man.

I had known Colonel Conkling for many years. He was enthusiastic in military affairs, and, under these circumstances, I was thrown in contact with him for a long time. He was with the 51st Iowa Regiment in the Spanish American War, and I knew of his service there, but I am particularly conversant with his service in France. He went there with the 42nd Division, was promoted to a Lieutenant Colonel, and commanded a sanitary train. He rendered valuable service to his Government in this tremendous emergency, as you would expect, for the sterling qualities of a true soldier were implanted in his character at birth. Colonel Conkling was a man of high ideals, and his life and character can well be taken as an example for coming generations.

Very sincerely yours,
M. W. Ireland,
Major General,
The Surgeon General.

MILITARY RECORD OF WILBUR SCOTT CONKLING

Private, 3rd Iowa National Guard, from March 18, 1896 to April 26, 1898.

Hospital Steward, 51st Iowa Infantry Volunteers, from April 26, 1898 to February 27, 1899. First Lieutenant and Assistant Surgeon 51st Iowa Infantry Volunteers, from February 27, 1899 to November 2, 1899.

Campaigns and battles participated in: Spanish American War and Philippine Insurrection, Iloilo Expedition. San Roque, February 9, 1899; Quinqua River, April 24, 1899; Pulilan East and West, April 24, 1899; Calumpit, April 25, 1899; North Fernando, May 25-26, 1899, June 22-30 and July 4, 1899. Around San Fernando, June 16, 1899; Calulut, August 9, 1899; Angeles, August 11, 1899.

First Lieutenant and Assistant Surgeon, Iowa National Guard, April 11, 1900 to April 12, 1905. Captain and Assistant Surgeon, I. N. G., from May 8, 1905 to April 12, 1906. Major and regimental surgeon, 3rd Iowa (55th Inf.), from May 16, 1906 to June 26, 1916. Major and Regimental Surgeon, 3rd Iowa, Mexican Border Service, from June 26, 1916 to February 23, 1917.

Major Medical Corps, Regimental Surgeon 168th Infantry, from July 15, 1917 to June 7, 1918. Director of Field Hospitals from June 8, 1918 to September 3, 1918. Commanding officer 117th Sanitary Train (42nd Division) from September 3, 1919 to muster out of train May 15, 1919. Promoted to Lieutenant Colonel, Commanding Officer, 117th Sanitary Train, March 7, 1919. MO May 31, 1919.

Lorraine Defensive Sector (Baccarat) March, April, May, 1918. Champagne Marne, July, 1918. Aisne Marne, July and August, 1918. St. Mihiel, September, 1918. Meuse Argonne, October, November, 1918. Army of Occupation, December, 1918 to March, 1919.

Appointed Lieutenant Colonel chief surgeon Iowa National Guard, July 13, 1921.

Appointed Lieutenant Colonel Med. ORC September 20, 1921.

The Journal of the Iowa State Medical Society

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MEDICAL DEFENSE

We trust that members of the State Medical Society, have read carefully the report of the Committee on Medical Defense, published in the July number of the Journal and also the editorial comments found in the August number of the Journal of the American Medical Association.

It will be recalled that some twenty years ago, Dr. Brockman recommended the appointment of such a committee, to assist members of the Society in the defense of suits for malpractice entered against them. Prior to that time the doctor sued was left to make his own defense at his own expense except such aid as might be afforded by medical or other friends. To the young or sensitive doctor, such experiences were very painful and disheartening. As a source of relief, a special committee was formed to aid the doctor in his defense and provide a means to relieve him of the very considerable expense of attorney fees. While several states had already taken up the work, it was still in the experimental stage; it was indeed pioneer work, and a plan had to be worked out. It was generally supposed that this committee was like any other committee, to function occasionally; if a doctor was sued for malpractice, to gather certain material facts for a report to the Society, and to audit one or more attorney bills, but it was soon found that this would be of little permanent value and could only reach the individual case, it was found that an efficient plan of defense was a complicated business science. On reading the editorial comments (Journal A. M. A.) it will be observed that certain omission in the committee report impaired in some degree its value from a legal or business point of view. But it should be remembered that this was new business and an office equipment was not provided. All the data is on file with the chairman of the committee, but it would be necessary to go over the more or less voluminous papers in more than 400 cases. From this time on we will be able to take up the several points in each case as they come up.

The development of commercial malpractice has not in any material degree made the work of the committee less complicated, but lessens the danger, not of a judgment, but it does lessen the burden of paying a judgment and reduces our attorney fees in that the commercial company pays its own attorney. We trust in particular that this medical defense will be regarded as purely a state society function and not a competitive business enterprise.

THE DOCTOR'S RECREATION

The medical practitioner feels that when he attends a medical meeting he is having his period of vacation or period of rest, while as a matter of fact his mind is more than usually active and when he returns home from the meeting he feels that he must take two or three days to rest up. What medical men need in recreation is to escape the "tired feeling" that comes from listening to patients' complaints, the describing of their difficulties and then the thinking, on the part of the doctor, to satisfy himself what the patient wants, more perhaps than what the patient needs. If a doctor has a hobby that is separate and distinct from his professional activities, he may give serious attention to this hobby and at the same time secure that rest of mind which every practitioner so frequently needs.

There is another thing in the doctor's life that people often forget, and that is the necessity of being within reach at all times day and night, and if others are affected as is the writer, the ringing of the telephone at night, or at other inopportune times is a source of mental disquietude. We recall with some feeling the comfort of being away from home on some visit entirely relieved of the dangers of night calls. So that when the doctor begins to have that "tired feeling" which is so often spoken of, it is time for him to get away from the contact of his professional work.

DO YOU READ THE MEDICAL JOURNALS?

There are a certain percentage of medical graduates who feel that their medical education is complete when they have received their diplomas from the medical college. These medical practitioners have in most instances, at least for a considerable period of time, only a small number of cases of any particular kind and they feel that their financial condition will not permit them to attend many clinics away from home. The loss of time from their practice leads them to feel, at least, that their competitors will work too deeply into their field of practice and so in the course of time they find themselves unfamiliar with the advancement of medicine and with an inadequate knowledge of research work.

The young medical practitioner should feel at the beginning of his professional career that there is a considerable amount of clinical knowledge that may come to his very door in the form of medical magazines which contain the best work of our greatest clinicians. Men like Dr. Deaver or Dr. Mayo and many others that might be named are extensive readers of periodical medical literature.

Some of these medical gentlemen we have referred to, feel that it is not worthwhile to spend time reading medical journals and medical books. They say that they have not the time but it not infrequently happens that these men have abundant leisure to attend the Country Club or the Kiwanis or Elks or other places of similar nature. Recreation is important to the medical man as to every other class but when it is apparent that the doctor spends less time in reading his medical journals than the stock breeder or the average farmer gives to his particular journals, then we find it difficult to excuse the general medical practitioner for his lack of knowledge.

CONCERNING MEDICAL SCHOOLS

If we may accept the opinion of Dr. Lyman Wilber, it is quite probable that no college curriculum will be able to make a pathologist, physiologist, anatomist or bacteriologist unless the student has some inherent qualities that enable him to appreciate this kind of work. This being true, the medical college would do better to train a well rounded general practitioner who may devote a large part of his time to medical and surgical diagnosis which would fit him for the diseases that are ordinarily met with.

There is a complaint going up that medical schools are undertaking to turn out radiologists, urologists, rhinologists, etc., at the expense of branches of medicine that come well within the capacity of the student of general medicine. It is contended that many students come out of the schools with a superficial knowledge of scientific branches which does not give them any well rounded conception as to their usefulness in their practice. A modern medical education is supposed to involve a thorough knowledge of many branches which the average practitioner rarely if ever uses and yet when he comes to the things that he needs to know he finds that the superficial methods entered largely into his entire medical course. We take it for granted that the student should be trained to his utmost capacity for his professional work but there should be some sort of a measure as to his capacity and he should be fitted into his work according to such measures.

BRINGING BACK THE COUNTRY DOCTOR

The Boston Medical and Surgical Journal presents some investigations that have been made as to the scarcity of rural practitioners and the methods to be employed in bringing them back to the old time position. These investigations are of sufficient interest to be reproduced and we therefore copy from the Boston Journal the results of these investigations.

"A number of searching investigations have been made with rather voluminous reports resulting concerning the scarcity of rural practitioners and, more ominous still, the lack of signs of proper replacement for those still in the field. The fact has not been difficult to prove. Pusey, in a canvass of all state medical society secretaries, received replies from thirty stating that rural communities were not being adequately served, and Nicoll, questioning state health officials received thirty-one replies to the same effect. A number of writers have shown the average age of country practitioners to be over fifty-two, and advancing rapidly, as against a much lower age in the city, and statistics compiled show the population for physicians in the country to be greater than a few years ago. It has been shown, further, that the average distance between doctors in the rural districts is greater than formerly.

"There are many reasons for this scarcity. In the first place a general cityward drift of all elements of the population has rendered the country a less prosperous place to live in. Good roads, the automobile and the telephone have made the town doctors more available, and in

good weather patients pass the local practitioner's door on their way to the town doctor's office. With the raising of our standards of medical education many schools have been eliminated and only those of relatively high quality left; the doctor's education is longer and more expensive, and he looks for a greater return on his investment than can be gained in the country. Modern educational methods, moreover, while of a high scientific calibre do not give the all round training necessary for him who must rely on his own resources in all sorts of emergencies.

"Many remedies have been suggested, ranging from the establishment of hospital centers, community laboratories and health stations, to the subsidizing of physicians and radical changes in our educational standards. Occasionally the need has been met; more often no satisfactory solution for a local problem has been found.

"The town of Altura, Minnesota, has solved its problem in a unique manner, according to the New York Times. Altura is a village of about 250 inhabitants and 200 farmer families within a few miles. The nearest doctor was formerly ten miles away. The villagers formed a Health Association, and after seeking expert advice advertised in a medical journal, making four offers to any satisfactory man.

"The first guaranteed him the patronage of 125 families at $24 a year; the second made a like guarantee, but the doctor was to practice on a fee basis, and only when his receipts fell below $3,000 was the association to be assessed for the remainder; the third was a promise to secure as many families at $24 a year as possible, who should have first claim, but the doctor was free for outside practice; and the fourth was without guarantee, the association acting only as advisers. The doctor was also to run the drug store.

"Fifteen physicians applied for the position, and the one chosen elected to serve under the third plan. The doctor is also required to serve in a health supervising capacity, giving two thorough examinations a year to all subscribers, and watching over sanitary conditions about their homes and about the village.

"Such a physician, if he is of the right type, can become a power for good in this community, a leader, rather than what he might appear to be, a paid servant of the community. After all, the future health service of our rural districts is largely in their own hands, and through their own intelligence and presightedness they can take care of their needs."

MORE RURAL HOSPITALS NEEDED

U. S. Department of Agriculture Makes Survey Showing Many Regions Lacking Facilities

Pioneer work done by many farming communities in establishing rural hospitals has been investigated by the Department of Agriculture, with the object of encouraging similar action in localities which at present are without hospital facilities. Although the movement for the establishment of rural hospitals is definitely under way, it has been checked by the increase in building and equipment costs resulting from war conditions, and by the necessity for economy in local government. Farming communities are urged by the department not to sacrifice health to their desire for economy. It is not really economical to dispense with hospitals, says the department.

As indicating the need for better rural hospital facilities, the department draws attention to the fact that there is a growing shortage of country doctors. Graduates in medicine, after going through an expensive and lengthy specialized training, prefer city practice where up-to-date medical facilities are available. They feel that to practice without these facilities is to sacrifice much of the value of their training. Accordingly, says the department, a necessary step in combating the abandonment of country practice by doctors is to furnish adequate hospital facilities in the country.

Not more than 12 per cent of the rural population of the United States, it is said, enjoys anything like modern health supervision. Forty Kentucky counties in 1924 were reported to be without adequate medical service. One of these counties had not a single doctor. In a Montana county of 5,000 square miles, there were only three doctors and no hospitals. In Minnesota 127 small villages were reported to be without doctors. Similar conditions existed in the Dakotas. This situation is believed to be largely due to the fact that modern medical education is developing physicians who will not consent to dispense with the advantages of up-to-date clinics and laboratories.

Credit for taking the initial step in a movement to satisfy the requirements of the modern physician in this respect is given to Washington county, Iowa, which was the first county in this state to take advantage of the state hospital law passed in 1909. This was the first law of its kind enacted anywhere in the United States. It authorized counties to tax themselves for hospital purposes. Under this law Washington county proceeded at once to erect a modern hospital, which is now in successful operation. Prior to that time Iowa had only one hospital bed for every 3,000 people in the small towns and rural districts. Thirty-two counties had not a single hospital bed. Since then sixteen other states have passed laws similar to the Iowa law, and many rural hospitals have been built. Forty were studied by

the department's investigators in making the rural hospital survey.

Rural hospitals have been of particular value in maternity cases. Although the city death rate in the United States has decreased, the rural death rate, according to health authorities, is stationary. This is largely due to the prevalence of child and maternal mortality on farms. It has been estimated that 750,000 women annually pass through child birth in the United States without medical attention. A large proportion of these women live on farms. There is no doubt, says the department, that the mortality rate among them could be greatly reduced by the provision of adequate medical and hospital facilities. Neglect of motherhood is also held responsible for many of the physical defects of children. Country school children, according to medical authorities, are handicapped by more physical defects than are the children of the city. It is considered significant, too, for the first time in the history of American vital statistics, the country in 1921 had a higher death rate for babies under one year than the city.

In a report on the country hospital situation, the department describes county hospitals supported by taxes; county hospitals connected with country homes; township hospitals; town hospitals; district hospitals; community hospitals; and hospitals supported by arrangement between communities and physicians. These are all doing good work in the various circumstances to which they have been adapted. Generally, says the department, the best satisfaction is given rural people by hospitals in which they have a direct interest. Town hospitals are usually open to the farm population in neighboring territory, but are apt to be looked on by the farmers as not primarily intended for them. Trustees controlling town hospitals are urged to make their availability known to farmers.

An interesting development is the formation of hospital districts, where county and township lines make local political communities too small for efficient public service. One such district hospital has been established at Berea, Ohio, by communities in two counties. Six distinct political subdivisions are included in the hospital district, which was formed under a state law passed for the purpose. A new hospital building was erected at a cost of $110,000. Community hospitals built by public subscription or by organizing stock companies and selling shares to a large number of the community have been successful. They compare favorably with other rural hospitals, says the department. One such hospital has been established at Hutchinson, Minnesota. An interesting event which occurred at the dedication of this hospital is recorded. Little Crow, leader of an Indian band that massacred the citizens of Ulm, Minnesota, in 1862, also led a band that burned the stockaded frontier hamlet of Hutchinson. At the dedication of the Hutchinson community hospital, a speech was made by Flying Earth, a granddaughter of Little Crow and a trained nurse in a Minnesota hospital. Flying Earth expressed regret for the act of her grandfather, and characterized the hospital as a "place to heal all wounds".

Southern mountain hospitals have done fine work where they have been established, says the department. Much ill health in the mountain districts has come from poor light and insufficient heat in homes, absence of sanitation, ignorance of dietetics, ignorance of the transmission of disease, early marriages with high infant and maternal mortality, and the absence of modern doctors, trained nurses, hospitals, dispensaries and clinics. In one North Carolina county of 10,566 inhabitants, out of about 5,000 people who were examined for hookworm 42 per cent were found to be infected. Of 816 school children, 2.3 per cent were suffering from trachoma. Rural hospitals and dispensaries are now being introduced, often as the result of devoted work by nurses and doctors. Health and medical officers are increasingly taking notice of the health problem presented by the 50,000,000 people living in rural territory. New state laws are removing legal obstacles to the establishment of rural hospitals, and a movement to multiply their numbers is under way. Much has already been done, says the department, to make farmers realize the value of hospitals and to remove old standing prejudices against them.

LOCAL ANESTHESIA IN THE REDUCTION OF FRACTURES

Dr. Ira Cohen of New York says that since 1924 he has used local anesthesia in the reduction of fractures. His method has been a local infiltration at the site of the fracture. The solution used by Dr. Cohen has been, procaine solution, from 0.5 to 1 per cent. When it is obvious that a large amount of the solution will be needed, as in the thigh, he employs the lesser strength. As before stated, the site of the infection is over the seat of fracture. It is important that the spot selected for the injection is where the skin appears normal. In the case of fracture of the leg or forearm, two separate punctures are needed, one over each bone. The amount of solution used by Dr. Cohen varies from 20 to 150 c.c. This form of anesthesia does not seem to have been popular in the United States. For ourselves we should much prefer to have our patient completely relaxed by a general anesthetic.

MEXICAN-AMERICAN MEDICAL CONFRATERNITY

One of the interesting features of the recent Dallas meeting of the A. M. A. was the large and prominent representation sent by the Republic of Mexico. In addition to a number of private physicians who attended, practically every Mexican medical organization sent delegates of its own.

In addition to the attendance of the Mexican associations both Cuba and Argentina were worthily represented by noted men.

SUBACUTE BACTERIAL ENDOCARDITIS

Spencer, Iowa, May 21, 1926.

D. S. Fairchild, M.D.,
Clinton, Iowa.
Dear Doctor:

It has occurred to me that the publication of a photographic copy of the enclosed letter, made as large as you feel you have space to give it, certainly large enough to make the fine print readable, might render a much needed service in Iowa.

You will recall that Dr. Spillman in his presidential address at Des Moines last Thursday evening said "Iowa is cursed with cults". If a full page could be devoted to the letter with my communication opposite, I am sure it could be used to advantage locally, judging by the reaction of those to whom I have shown the letter itself.

My own judgment is that the best way in which to combat the baneful influence of quackery, which is rampant, is to make use of their own weapons when the opportunity presents, viz.: publicity.

Yours most cordially and fraternally,
E. E. Munger, M.D.

P. S.—I trust the subject matter will suggest the writing of one of your own worth-while judicious editorials. Please return the Chiropractic's letter to me when you have finished with it as I have further use for it.—E. E. M.

Spencer, Iowa, May 21, 1926.

D. S. Fairchild, M.D., Editor,
The Journal of the Iowa State Medical Society,
Clinton, Iowa.
Dear Doctor:

The following correspondence refers to Marvin Scharnberg, eleven years old. For more than a year he has been confined to bed with that most distressing and disastrous of all heart diseases, subacute bacterial endocarditis; the streptococcus viridans is the offending organism.

The letter was handed to me by the boy's mother who requested advice as to its merits. Notwithstanding she had been convinced, largely by her own high-grade common sense, that the damage already done is irreparable and the outlook quite hopeless, still hope mounts high in the mother's heart when stimulated by positive assurances.

Being a "country doctor", soon to be remembered by a "memorial" to the "Old Country Doctor", proposed to be erected in Washington, I hesitated to express an opinion and said to the mother that I would endeavor to obtain expert advice for her.

The startling percentages given in the letter relative to the cure of "heart troubles" are important, if true; the information should be wisely distributed and not confined to person-to-person letters. The good news, if true, should be of particular interest to the people of Iowa whose intelligence has never been questioned; also to the Iowa Heart Association, which is affiliated with the American Heart Association.

The letter is submitted to you for publication in the hope that it will be called to the attention of WSUI and WOC who seem to be on speaking terms over the same wave length; both undoubtedly are interested in the subject and in position to broadcast the information desired.

Yours truly,
E. E. Munger, M.D.,

Spencer, Iowa, April 27, 1926.

Mr. Frank Scharnberg,
R.F.D. No. 2, Everly, Iowa.
Dear Mr. Scharnberg:

A mutual friend has advised me of the trouble or sickness of your son—I believe it is "Mitral Incompetency"—or to be less technical—that condition where the valves on the left side of the heart do not close and allow some of the blood that has been strated out in the arteries to be forced back into the heart—due to the valve not closing properly.

The success of chiropractic in heart troubles has been wonderful—to be exact the percentage of cures over the United States being 79 per cent—this is a very carefully kept report and is accurate.

In a person as young as your son—the chances of cure is increased greatly—due to youth.

Won't you please call so that I may explain to you in person.

I am enclosing the latest "Health Builder" in it you find the record of a case handled by this office last summer.

Sincerely yours,
L. A. Younkin, D.C.

Fairfield, Iowa, September 9, 1926.

Dear Doctor:

I see by the Oskaloosa paper that Governor Hammill has "bounced Dr. Abbott" by appointing him to represent Iowa at the American Hospital Association Atlantic City meeting.

Abbott, kicked out of his county society, is practicing Abram's and all sorts of fraud. He is treating a child in the county "by radio".

It seems to me the governor insulted us all by naming such a man.

Yours,
(Signed) J. Fred Clarke, M.D.

Des Moines, September 8, 1926.

Doctor J. Fred Clarke,
Fairfield, Iowa.
My Dear Doctor:

I am in receipt of your letter concerning Doctor C. A. Abbott of Oskaloosa whose name was forwarded to the American Hospital Association as an honorary delegate to the annual meeting. The list of hospitals was furnished us by the health department.

I am pleased however to receive your letter. I am sure, doctor, you will find that among the list

selected are doctors and nurses of the very highest order.

With kind personal regards, I am

Yours truly,

John Hammill,

Governor.

THRIVING SUBURBAN COMMUNITY WANTS RESIDENT PHYSICIAN

The undersigned is pastor of a community church in a single residence section of Medford. We have about 4500 people in our district at this time and are rapidly increasing in number. There is no resident physician here. We have a small business section in the center of the community. There is an excellent building just being completed which will provide splendid quarters for a family and two rooms for office and examination room at a cost of only $50 a month. I might add that a ten-cent fare and thirty-five minutes will put one in the heart of Boston from our community.—John Shade Franklin, 636 Fulton, Medford, Massachusetts.

—The Boston Medical and Surgical Journal.

SPONTANEOUS RUPTURE OF THE HEART

Drs. Nuzum and Hagan in the American Journal of Medical Science review 320 cases represented of heart rupture and include five cases of their own. In the cases where the age is given it was found that it occurred after the age of fifty. In 226 of 325 ruptures the predisposing cause was embolism or an atheromatous sclerosis and thrombus formation in the coronary arteries. Mental strain, extreme emotion and physical exertion has been stated by some as present at the time of rupture. The heart is generally enlarged and in many cases associated with hypertension. Less than 25 per cent of the cases studied gave a history sufficient of previous heart disease.

CONTROL OF POSTOPERATIVE TONSILLAR HEMORRHAGE

Dr. J. C. Tucker in the Nebraska State Medical Journal cautions against tonsillectomies without having previously investigated the coagulation time of the blood. If the coagulation time is below nine minutes the patient should receive calcium lactate and fibrogen, thromboplastin or coagulose and the operation should be deferred until the clotting time is normal. Some disasters from hemorrhage after tonsillectomies have been due to the delayed time in blood coagulation and the surgeon should take this fact into account in preparing his patient for what should be regarded as a major operation.

WHERE MEDICAL CLASSIFICATION OF HERNIA IS UNIMPORTANT

(Klika vs. Independent School Dist. No. 79 [Minn.], 202 N. W. R. 30)

The supreme court of Minnesota, in remanding for a rehearing this proceeding, under the workmen's compensation act, in which the industrial commission denied compensation for an inguinal hernia alleged to have been caused by a strain while the claimant was working on the defendant's grounds, holds that an inguinal hernia, the development of which is caused by overexertion or strain, is an "accidental injury" within the workmen's compensation act of that state, and is compensable. It is unimportant in the administration of the law whether from a medical or scientific standpoint hernia is classed as a disease or a malformation or is otherwise designated; nor is it important that the employe was predisposed thereto. The law concerns itself only with the legal cause. Where the evidence points forcefully to an unusual strain in the course of employment as the legal cause of the development of a hernia, and the asserted medical view that hernia is a progressive disease is so emphasized and so permeates the consideration of the case as to obscure the search for the legal cause, a rehearing should be granted.

THE PUBLIC HEALTH SERVICE ANNOUNCES A NEW PUBLICATION

The United States Public Health Service announces the issuance of a publication known as the "Venereal Disease Manual for Social and Corrective Agencies".

There is much evidence which emphasizes the relationship between venereal diseases and feeblemindedness, insanity, dependency, delinquency, crime and other conditions affecting the social structure. Study and investigation have shown the need on the part of social workers, probation officers and others for authentic information on the venereal diseases and their concomitants which so deeply affect society. It was to meet this definite need that the publication was prepared.—The Boston Medical and Surgical Journal.

TRAVEL STUDY CLUB OF AMERICAN PHYSICIANS

At the completion of its recent European study tour, the Travel Study Club of American physicians elected Dr. Fred H. Albee of New York as president, Drs. Edward B. Heckel of Pittsburgh and John P. Lord of Omaha as vice-presidents, and Dr. Richard Kovacs of New York as secretary.

Plans are being prepared for the next study trip, including the Central European countries: Germany, Austria, Czechoslovakia, Hungary and Italy.

SOCIETY PROCEEDINGS

Cerro Gordo County Medical Society

The regular September meeting of the Cerro Gordo County Medical Society was held September 21, 1926, at the Chamber of Commerce rooms, in Mason City, this being the first meeting after the customary three months intermission during the summer. The meeting was called to order at 8:30 p. m. by President C. E. Dakin. Due to the summer intermission there was considerable business to dispose of, after which the program was as follows:

Fractures of the Humerus—Dr. G. M. Crabb, Mason City. Discussion—Dr. C. E. Dakin, Mason City.

X-ray Diagnosis and Treatment of Whooping Cough—Dr. C. M. Franchere, Mason City. Discussion—Drs. Dakin, Crabb, Fitzpatrick and Starr. Discussion closed by Dr. Franchere.

Meeting adjourned.

Crawford County Medical Society

On August 6 the Crawford County Medical Society held its annual meeting at Denison, Iowa, with headquarters at the Club Rooms of the Chamber of Commerce.

After the banquet, which was served at Hotel Denison, Dr. B. A. Melgaard of Sioux City, Iowa, spoke on Feeding of Children, which presented a very practical view of the subject. After that we were favored with a very interesting essay on Diet in Disease, by Dr. Clifford J. Barborka of the Mayo Clinic, Rochester, Minnesota.

Both papers were highly appreciated by all who were present. The officers of the society were re-elected.

C. L. Sievers, M.D.,
Sec'y Crawford County Medical Society.

Davis, Appanoose, Wapello and Van Buren County Medical Societies

Davis, Appanoose, Wapello and Van Buren County Medical Societies met at the Bloomfield Country Club July 8 for a dinner and program. At this meeting the Davis County Medical Society elected Dr. Gilfillan of Pulaski, president, and Dr. Young of Bloomfield, secretary.

Hardin County Medical Society

The mid-summer meeting of the Hardin County Medical Society was held at Iowa Falls, Iowa, Tuesday afternoon, August 17, 1926. The following program was given:

The Differential Diagnosis of Appendicitis and Pyelitis—H. W. Scott, M.D., Fort Dodge, Iowa.

Early Diagnosis and Treatment of Syphilis by the General Practitioner—Wm. R. Hornaday, M.D., Des Moines, Iowa.

Some Economic Aspects of the Practice of Medicine—J. B. Knipe, M.D., Armstrong, Iowa.

About sixty sat down to the banquet served in the Community Club room at 6:00 p. m., many doctors being present with their wives.

Officers present were Clarke W. Mangun, M.D., president, Iowa Falls; J. F. Brubaker, M.D., vice-president, Hubbard; W. E. Marsh, M.D., secretary, Eldora; C. M. Wray, M.D., treasurer, Iowa Falls.

Kossuth County Medical and Dental Societies

The Kossuth County Medical and Dental Societies met Wednesday, August 4, at the Algona Country Club. Dinner was at 7 o'clock, after which the following program was presented:

Diabetes—Dr. George Hauberg, Moline, Illinois.

Care of the Child's Mouth—Dr. A. D. Adams, Algona.

Dr. W. T. Peters, President.
Dr. E. C. Hartman, Secretary.

Linn County Medical Society

The Linn County Medical Society at its annual meeting elected the following officers: L. M. Downing, M.D., Cedar Rapids, president; J. R. Gardner, M.D., Lisbon, vice-president; Thos. F. Suchomel, M.D., Cedar Rapids, secretary; Emma Jewell Neal, M.D., Cedar Rapids, treasurer.

Polk County Medical Society

The Polk County Medical Society met for its regular monthly meeting in the Oak room of the Fort Des Moines Hotel, on September 22, 1926. The meeting was called to order by the president, Dr. Thomas A. Burcham.

The minutes of the previous meeting were read and approved.

Memorial meeting program was held for Dr. Wilbur S. Conkling. Speakers: David S. Fairchild, M.D.; Walter L. Bierring, M.D.; Mat A. Tinley, M.D.; Lewis Schooler, M.D., and Frank L. Williams, M.D.

An amendment of Section 3, Chapter 1 of the by-laws was read and included in the minutes of the last regular meeting, and was presented to the society for action. Each member having received a copy by mail. It was moved and duly seconded that this be approved and the by-laws be so amended. Motion carried.

The application of Dr. S. Lall, by transfer from Searcy County, Arkansas, was presented. Dr. G. Ryan moved that the by-laws be suspended and Dr. Lall be unanimously elected as a member of this society. Duly seconded and unanimously carried.

The application of Dr. J. Goldstone and Dr. H. B. Henry were presented to the society and were referred to the board of censors.

The president presented the matter of having medical talks, given over WHO broadcasting station. Various papers prepared by members of the Polk County Medical Society. The president stated that a committee had been appointed consisting of Dr. Ross Huston, chairman and Dr. J. S. Weingart and Dr. M. M. Myers. They had met and tentatively chosen several subjects for these talks and would make further arrangements.

Fifty-seven were present at the meeting.

L. K. Meredith, Sec'y.

COMING MEETING

The Iowa Radiological and Physiotherapy Society will meet at the Fort Des Moines Hotel, November 11 and 12th. A detailed account of the meeting appears in advertising section of this Journal.

SOUTHERN MINNESOTA MEDICAL ASSOCIATION

The annual meeting of the Southern Minnesota Medical Association will be held at Mankato, Minnesota, Monday, October 18, 1926.

The following is the tentative program:

8:30-8:40—Session opens. Preliminary announcements.

8:40-9:20—Presentation of Case Abstracts by Members of Association.

9:20-10:00—Clinical Demonstrations of Cases of Diabetes Mellitus—A. E. Sohmer, M.D., Mankato, Minnesota and H. J. Lloyd, M.D., Mankato, Minnesota.

10:00-10:25—Periodic Health Examination, Practical Demonstration—A. M. Snell, M.D., Rochester, Minnesota.

10:28-10:43—Recent Observations Concerning Urinary Tuberculosis—G. J. Thomas, M.D., Minneapolis, Minnesota, Assistant Professor Urology, University of Minnesota.

10:45-11:00—X-Ray of Bones in Pediatrics—T. L. Birnberg, M.D., St. Paul, Minnesota.

11:03-11:18—Treatment of Otitis Media in Infants and Children—C. W. Rumpf, M.D., Faribault, Minnesota.

11:20-11:30—Discussion of Two Preceding Papers—F. W. Schultz, M.D., Minneapolis, Minnesota, Professor of Pediatrics, University of Minnesota.

11:33-11:48—The Control of Infections in Injuries to Bones and Joints. (Motion Pictures)—H. W. Orr, M.D., Lincoln, Nebraska.

11:50-12:05—State Medicine in Germany — G. Schnarruberger, M.D., Rollingstone, Minnesota.

12:15-12:25—The Nature of Glossitis in Pernicious Anemia—J. P. Schneider, M.D., Minneapolis, Minnesota, Assistant Professor of Medicine, University of Minnesota.

Luncheon

1:30-1:45—President's Address—F. R. Huxley, M.D., Faribault, Minnesota.

1:48-2:03—Ileostomy in Acute Peritonitis.—C. J. Holman, M.D., Mankato, Minnesota.

2:05-2:20—Alcohol and Its Effect on the Nervous System—G. R. Kamman, M.D., St. Paul, Minnesota, Assistant in Department of Nervous and Mental Diseases, University of Minnesota.

2:23-2:38—Title to be announced—W. T. Coughlin, M.D., St. Louis, Missouri, Prof. of Surgery, St. Louis University.

2:40-2:55—Rectal Complications in Pregnancy—W. A. Fansler, M.D., Minneapolis, Minnesota.

3:00-3:15—Cancer Problems—W. J. Mayo, M.D., Rochester, Minnesota.

3:18-3:33—Intravenous Therapy—J. A. McIntyre, M.D., Owatona, Minnesota.

3:35-3:50—Surgical Treatment of Gastric and Duodenal Ulcer—R. C. Coffey, M.D., Portland, Oregon, President Western Surgical Association.

3:53-4:08—Difficulty of Adjustment During the Adolescent Period—G. Donohoe, M.D., Cherokee, Iowa, Superintendent Cherokee State Hospital.

4:10-4:25—Immunization Against Scarlet Fever and Diphtheria with Detoxified Toxin—W. P. Larson, M.D., Minneapolis, Minnesota, Professor of Bacteriology, University of Minnesota.

4:28-5:20—A Symposium on Surgery of the Sympathetic Nervous System in the Treatment of Vascular Disturbances—E. Andrews, M.D., Chicago, Illinois, Assistant Professor of Surgery, University of Illinois; A. W. Adson, M.D., Rochester, Minnesota; G. E. Brown, M.D., Rochester, Minnesota.

5:20—Business meeting with Election of Officers.

Banquet

Banquet Speakers: Dr. Herman Johnson, President of Minnesota State Medical Association; Dr. W. T. Coughlin, St. Louis, Missouri; Dr. H. Winnet Orr, Lincoln, Nebraska.

PERSONAL MENTION

Drs. Tiffany J. Williams, New Haven, Connecticut; Norman F. Miller of the University of Michigan, Medical School, Ann Arbor and Cleary N. Swanson, Detroit, have been appointed to the staff of the obstetrics department at the University of Iowa College of Medicine.

Dr. Carl Henry Matthey of Davenport, who has just completed a year's internship at Barnes Hospital, St. Louis, Missouri, has been appointed assistant resident surgeon at St. Agnes Hospital, Baltimore, Maryland.

Dr. H. B. Henry, formerly acting clinical director at the U. S. Veterans' Hospital No. 57, Knoxville, Iowa, has resigned from government service and located in Des Moines with offices in the Bankers Trust Building. Practice will be nervous and mental diseases.

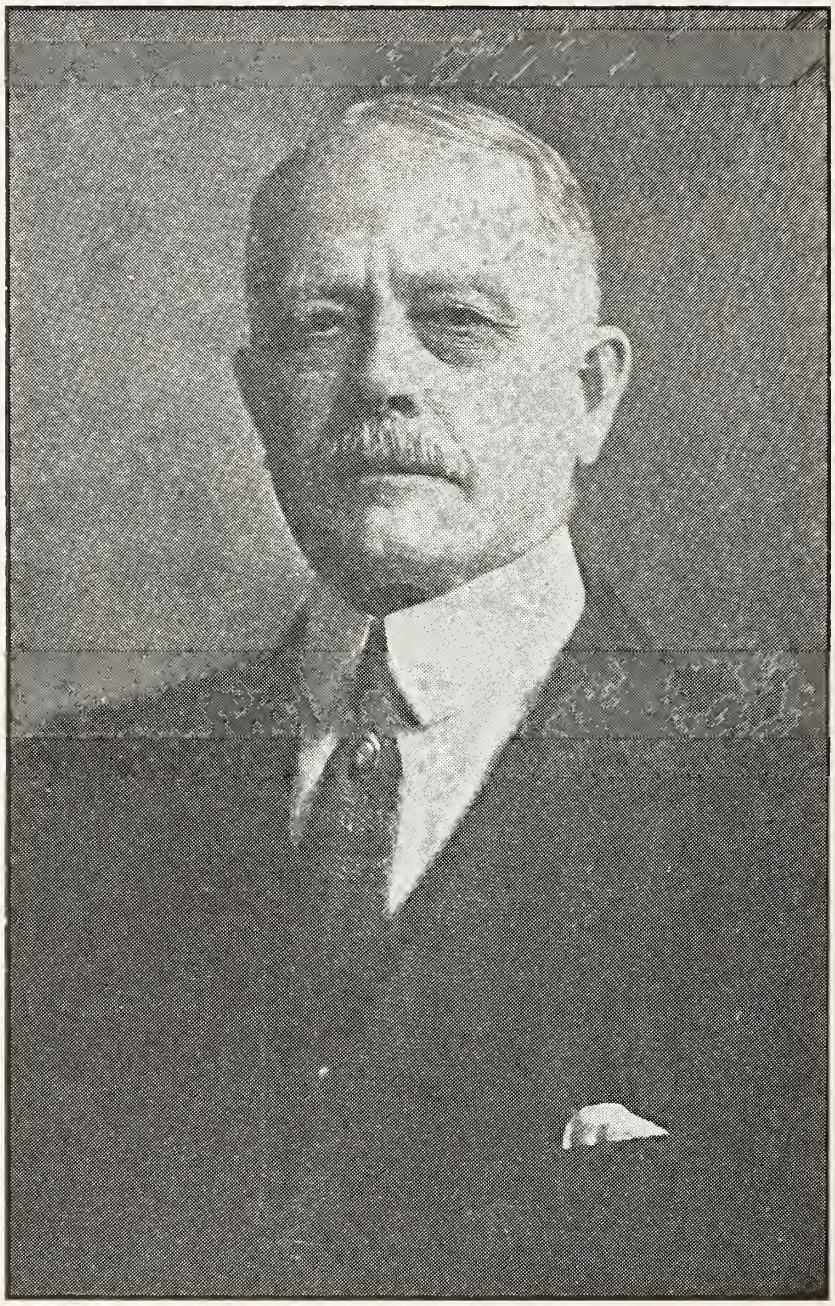
Dr. George W. Hinkle of Harvard has practiced medicine in Wayne county for over fifty years. Dr. Hinkle graduated from the Keokuk Medical School in 1875 and is still in practice.

Dr. H. A. Harris, associate professor of anatomy, in the University College, London, delivered an address before a meeting of the Des Moines Academy of Medicine at hotel Fort Des Moines, June 2.

Dr. H. A. Bender, formerly of the eye and ear department of Iowa University, has located in Waterloo and will be associated with Dr. Herold Reuling.

Dr. L. A. Bassett of Boone was injured recently at his summer home at Ten Mile Lake.

Dr. F. W. Boland, formerly of Omaha, has located in Sibley.



DR. T. L. PUTMAN

OBITUARY

Dr. T. L. Putman, long time physician and surgeon at Shenandoah, Iowa, passed on Thursday, August 26, 1926, his death taking place suddenly at the Mizpah Hotel, where he had made his home for several years following the death of his wife.

T. L. Putman was born at Princeton, Missouri, February 8, 1859. He taught school in the early days of his manhood in Illinois and then attended college and graduated from Rush Medical College, Chicago, in 1885. He located in the practice of medicine first at Riverton, Iowa, and then in 1891 moved to Shenandoah, where he continued the practice of medicine and surgery until his death, thirty-six years.

He took an active part in all movements for the improvement of the community in which he lived and was a member of the Odd Fellows and Elks lodges and the Methodist church; surgeon for the Wabash and Burlington railroad companies, and member of all the regular medical associations, regional and national.

One outstanding accomplishment of Dr. Putman was his friendly influence over a wealthy and childless couple in Shenandoah, securing from them the bequest with which the Katherine and Henry Hand Hospital was erected in Shenandoah and which is today one of the chief beneficiary institutions in Shenandoah.

Dr. Putman leaves an only son, Dr. Lynn J. Putman, now a practicing physician and surgeon in Fremont, Nebraska.

Dr. William W. Nelson died at his home in Birmingham, Iowa, February 29, 1926. Dr. Nelson was born in Wayne county, Ohio, November 30, 1834. After two years in Washington College he went to Wooster, Ohio, where he read medicine with Drs. Day and Wilson. During the winter of 1858-59 he attended lectures in the medical department of the Iowa State University at Keokuk and the following year 1860 graduated from Jefferson Medical College, Philadelphia.

On August 19, 1862, Dr. Nelson was commissioned by Governor Kirkwood, first assistant surgeon of the Fifteenth Iowa Infantry, and mustered into service September 14, 1862 at Keokuk. He joined his regiment at Iuka, Mississippi, but was soon taken with malarial fever. On recovering he rejoined his regiment at Grand Junction, Tennessee. In the spring of 1863 he was in charge of numerous hospitals up to the spring of 1864 when his regiment, the Third Iowa, was consolidated with the Second Veteran Infantry preparatory to Sherman's March to the Sea, during which time Dr. Nelson participated in many battles. On May 24, 1865, he was mustered out with his regiment at Louisville, Kentucky. In the fall of 1865, Dr. Nelson located at Birmingham, Iowa.

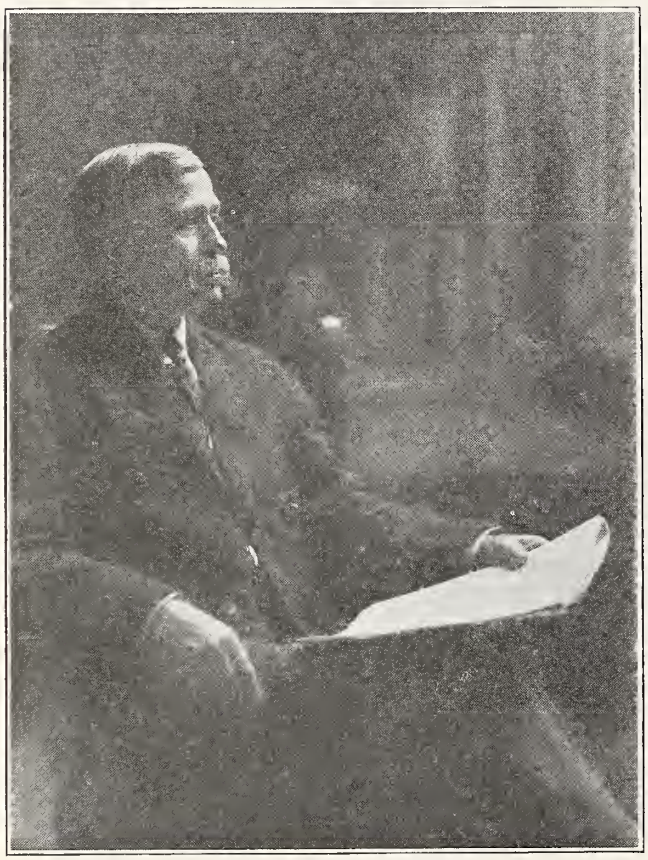
Dr. H. M. Templeton died suddenly at his home in Ames, August 26, 1926, at the age of seventy-eight years. For many years Dr. Templeton has been recognized as the senior medical practitioner of Story county. He was born in Ohio August 18, 1848, and came to Story county with his parents in 1856. His father was a sturdy farmer and located on a fine piece of land three and one-half miles south of Ames. Dr. Templeton grew up under the most favorable circumstances. Early learned the value of work and economy and experienced the advantages of a Christian environment. After receiving a common school education he began the study of medicine under the direction of Dr. James Bradley of Ames and matriculated in the medical department of the Iowa University for one term: later he entered the Kentucky Medical School, Louisville, from which he graduated in 1877 and located in Ames, where he practiced up to the time of his death.

Dr. Templeton was a typical country practitioner. He had been raised on a farm and was thoroughly familiar with the likes and prejudices of the farmer and never divorced himself from farm life. He inherited the old Templeton homestead and nothing gave him more pleasure than to see things grow and prosper on the home place. It was the privilege of the writer to know Dr. Templeton intimately for more than fifty years, and often envied him the genuine pleasure the Doctor derived from mingling with genuine upright farmer people of his old neighborhood. It was never his purpose or aim to cultivate the farmer for selfish or sinister purposes. This was his fad and never in any degree did he permit it to interfere with his devotion to his profession. The people trusted Dr. Templeton to an unusual degree and partisans of other physicians rarely spoke of him in an unkindly manner. He was local surgeon of the Chicago and Northwestern Railway Company, a position he occupied for more than thirty years, and was a member of the Northwestern Railway Surgical Association, a member of the Story county and the Iowa State Medical Societies. Dr. Templeton's domestic relations were admirable. In 1830 he married Miss Edna Granger who died in 1912. In 1914 he married Miss Lillian Ayers who, with three children of the first marriage survive him. Dr. Templeton was an active and conscientious member of the Congregational Church. In addition to his duties as a physician, he found time to participate in civic and health activities. In truth, he represented during a period of fifty years, in a modest and unpretentious manner, the highest ideals of a general practitioner and family doctor.

DR. H. M. TEMPLETON

Dr. F. W. Cram of Sheldon died at the Cram Hospital August 24, 1926, at the age of seventy-one years, nine months and nine days, from an infection of the hand received in the treatment of an infected wound.

Dr. Cram was born November 15, 1854, in Bangor, Maine. He secured his early education in the common schools of Minnesota and at the St. Croix Valley Academy and began his medical education at the medical department, Michigan University and graduated from Rush Medical College, Chicago, in 1878. He first located in Jordan, Minnesota, and in 1879 moved to Sheldon, Iowa. In 1903 he established the Cram Hospital. In 1880 he married Miss Dora Walter, who died in 1898 and in 1900 he married Mrs. Hattie Lanning, who survives him. Dr. Cram was recognized as a leading physician in northwestern Iowa. He was devoted to his profession and was esteemed a leading citizen of O'Brien county. He was local surgeon of the I. C. and C. M. & St. P. Railway Companies.



DR. F. W. CRAM

Dr. John L. Tierney of St. Louis, who recently died at Santa Fe, New Mexico, was born in Lead, South Dakota. When an infant he was brought to Manchester, Iowa, where he lived until about 1910, when he entered St. Louis University. Dr. Tierney had gained a high degree of distinction in internal medicine.

DR. GUILLOTIN

According to the Boston Medical and Surgical Journal, Dr. Guillotin is not entitled to all the honor for having conceived the plan of a machine for the expeditious and effective method of decapitation of criminals with the minimum of pain and suffering. The guillotine gained great distinction during the French Revolution as a means of removing many aristocrats, undesirable to the masses.

It appears that Guillotin was a modest physician, born at Saintes in the year 1736 and died in 1814. In 1789 he was a deputy to the Constituent Assembly to Paris, where he proposed a machine for a painless decapitation of criminals. It is stated that a similar machine was used in China at an early date and that there was an Italian engraving made in 1555 which gave Dr. Guillotin his idea. It was not primarily intended for the French Revolution, for the Assembly voted May 3, 1781 that "all criminals condemned to death should be decapitated".

The horror associated with the guillotine comes from the great number of innocent men and women who came under its influence during the French Revolution.

WHAT TO DO FOR BURNS

The most important requisite in the treatment of burns is relief from pain. Another important factor is the prevention of infection. There is only one chemical compound which, in a single remedy, accomplishes both of these purposes. Butesin Picrate combines the analgesic, pain relieving properties of Butesin, a practically non-toxic local anesthetic of the same type as anesthesin, but two to four times as powerful, and the antiseptic action of picric acid, which in itself has always been a popular medicament for burns.

Butesin Picrate Ointment is a most convenient method of treating burns. The relief from pain is almost instantaneous. There are no sprays or wet dressings. The ointment can easily be applied by a nurse or even by the patient. The use of Butesin Picrate Ointment, for severe burns, makes unnecessary the administration of morphine to relieve pain.

Butesin Picrate Ointment is efficient in first degree burns, as well as in second and third degree types. It should be in all first aid cabinets—as well as in all households—for emergency use.

Many industries are using Butesin Picrate Ointment not only for burns, but for wounds, cuts and abraded or denuded skin surfaces, having found that it permits the earlier return to work of their employes.

Physicians recommend and use Butesin Picrate preparations because they are approved by the Council on Pharmacy and Chemistry of the American Medical Association.

Recent literature on Butesin Picrate Ointment may be obtained by writing the Abbott Laboratories, North Chicago, Illinois.

BOOK REVIEWS

ABT'S PEDIATRICS

By 150 Specialists; Edited by Isaac A. Abt, M.D., Professor of Diseases of Children, Northwestern University, School of Medicine, Chicago; Set Complete in 8 Octavo Volumes Totaling 8000 Pages with 1500 Illustrations, Separate Index Volume Free. W. B. Saunders Co.; Price $10.00 Net.

We have before us volume eight of this great work. This volume contains 1102 pages with many illustrations.

The first section of volume eight is devoted to Diseases of the Skin by men well known in this special line of practice.

The second section contains two papers, one Diseases in Childhood, by Dr. George E. Shambaugh, and Ocular Diseases of Infancy and Childhood, by Dr. Casey A. Wood.

Third Section: Hospitals for Infants and Children, by John M. Dodson and Richard E. Schmidt; Medico Legal, by Dr. James P. Simmons; Tumors of Infancy and Childhood, Dr. Oscar D. Schultz; Encephalitis, by Dr. Leslie B. Homman, and Animal Parasites, by Henry Baldwin Ward, Ph. D., Sc. D.

This volume is the last of the series so ably edited by Dr. Abt and constitutes one of the most important and extensive works on Diseases of Childhood.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION, ROCHESTER, MINN.

Octavo of 1078 Pages, 252 Illustrations. W. B. Saunders Co., 1926. Price, Cloth $13 Net.

This volume of collected papers is for 1925, published in 1926. The committee on publication, Mayo Clinic of the Mayo Foundation, announces as heretofore that "the material for this volume has been selected to suit the needs of the general surgeon and general physician".

We find on consulting the list of contributors that some 161 members of the clinic are responsible for the contents of this volume. For the convenience of reference and study, the book is divided into several sections; the first on Diseases of the Alimentary Tract which consists of 42 papers; of the Urogenital Organs, 37 papers; on the Blood and Circulatory Organs, 19 papers; on Skin and Syphilis, 12 papers; on Head, Trunk and Extremities, 17 papers; Chest, 5 papers; Brain, Spinal Cord and Nerves, 7 papers; on Technique, 8 papers; on Miscellaneous Subjects, 22 papers. This statement will give an idea of the vast amount of work found recorded in these pages. The papers are short and concise in character. Most of these papers have been read before some important medical society and then prepared in abstract for publication.

We are not able to select many of these contributions for special reference. One comes to our notice particularly by Porter P. Vinson on Cardiospasm. While these cases are not frequent yet they are sufficiently so to merit watchful consideration in a certain class of patients that apply in early infancy where it is exceedingly important that the physician make an early diagnosis as to the necessity of an operation, or to adopt other means of cure.

The principles involved in surgery of the stomach and duodenum are of great importance in determining the course of procedure which is not always an easy matter. It is undoubtedly true that much surgery has been and is being done on the stomach without a clear appreciation of the fundamentals and Dr. Donald C. Balfour has given us a contribution including 400 cases, in which fundamental principles are involved. A careful study of these papers will aid in determining the advisability of surgery.

Primary Carcinoma of the Duodenum has been received as a comparatively rare disease and the review of literature does not present many cases. Dr. George B. Eusterman, Dr. David M. Berkman and Dr. Theodore S. Swan have been able to collect from the Mayo Clinic fifteen verified cases which may be regarded as an interesting fact in the pathology of this organ.

Secondary Operations on the Common Bile Duct, by Waltman Walters, presents some interesting data on this subject. To the operating surgeon reoperation on the common bile duct is one of the most undesirable undertakings in surgery, requiring the highest degree of skill and Dr. Walters has in this communication endeavored to show what had best be done.

The Liver and Bile Ducts receive much attention in this volume, surgical, physiological and pathological. Among them is a paper on Hepatic Function in Health and Disease, by Dr. Charles H. Mayo, and another on Abnormal Function of the Liver, by Dr. Waltman Walters and Dr. William J. Mayo.

Considerable space is given to the discussion of various types of intestinal disease. Following the discussion on Diseases of the Intestinal Tract comes the rather extensive consideration of Diseases of the Kidney.

Among the papers relating to the urinary tract is one by Dr. Waltman Walters on the Physiologic Principles in the Treatment of Benign Hypertrophy of the Prostate. Following this paper is another under the title of Carcinoma of the Prostate; a Clinical Study of One Thousand Cases, by Dr. Herman C. Bumpus, Jr.

Following diseases of the kidneys comes some studies in Gynecological Surgery. The paper that first attracts our attention is by Dr. Harry H. Bowing on the Treatment of Carcinoma of the Cervix and Fundus by Combinations of Surgery, Radium and Roentgen Ray, and the author notes that in the treatment in the early or operable cases the

methods are especially efficient; unfortunately most of the cases are of the advanced type and radio therapy in these cases alone does not meet the present demand, so that it is found that by a careful selection of patients the combination of x-ray with surgery brings the best end results.

Dr. Henry S. Plummer opens the discussion on the Ductless Glands with a paper on the Function of the Thyroid Gland. This paper demands a careful study on the part of those who treat the thyroid as furnishing a fundamental basis for medicine or surgery.

The section on Diseases of the Heart is introduced by Dr. Frederick A. Willius on Prognosis in Heart Disease.

Two important papers appear from the pen of Dr. William J. Mayo on the Spleen, a subject upon which Dr. Mayo has given many years of careful study in which he has recorded some of the important problems relating to the physiology and pathology of this organ.

It is quite impossible to mention more than a few of the subjects which are fundamental in the study of diseases of the various systems of the body. It goes without saying that all the papers that appear in this volume have been carefully selected and carefully edited.

THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY IN THE WORLD WAR

Volume 8, Field Operations; Prepared Under the Direction of Maj. Gen. M. W. Ireland; By Col. Charles Lynch, M.C.; Col. Joseph H. Ford, M.C.; Lieut. Col. Frank W. Weed, M.C. Government Printing Office—1925.

This volume of about 1100 pages is devoted to Field Operations of the United States Expeditionary Forces.

Section One—After considering plans of Organization, activities of Divisions were taken up.

Section Two—American Divisions with French Armies.

Section Three—The St. Mihiel Operation.

Section Four—Meuse—Argonne Operations.

Section Five—Operations Cotemporaneous with the Meuse—Argonne Operations.

Section Six—American Expeditionary Forces with the British.

Section Seven—American Expeditionary Activities in Germany, Italy, North Russia and Siberia.

After reviewing hospitals of every kind, ambulances, supplies, etc., employed, the operations of each Division are set forth as a Division and in association with other Divisions, Ambulance Companies, Field Hospitals Evacuation, Medical Supplies; illustrated by colored maps and so on, beginning with the lowest numbered Division and passing through with all the Divisions engaged in each one of the above enumerated sections. In this way may be traced each Division in our Expeditionary Forces through the several phases.

The arrangement of the volume is such that the operations of each Division may be followed from organization in the United States to the close of its service and by means of maps the movements of the Division in a given field of activity may be traced. A Division like the Forty-Second will be found under several Sections or Phases, and each phase is marked by a new map.

The War Department is certainly to be commended for the fine work done on this volume.

THE SURGICAL CLINICS OF NORTH AMERICA

Volume 5, Number 6, 223 Pages with Complete Index to Volume 5; and 50 Illustrations. W. B. Saunders Company, 1925. Price Per Clinic Year, Paper $12.00; Cloth $16.00 Net.

There are, as might be expected, an impressive number of surgical, clinical discussions. There is not a very considerable number of surgeons holding clinics, but each clinic presents a considerable number, as for instance, fifteen cases in Dr. Deavers' clinic and twenty cases by Dr. George P. Muller at the University Hospital in group arrangement by different representative practitioners of Philadelphia. These clinic cases are considered from every angle and have a much higher clinical value than chance cases that may come into the clinics; such a plan is difficult except in medical centers and great hospitals.

Dr. Charles H. Frazer presents a group of neurosurgical cases. Dr. Frances C. Grant presents a valuable contribution on the Treatment of a Cranial Trauma, which should be studied with great care. Dr. Brooks M. Anspact contributes a gynecological clinic. Dr. Leon Herma a genitourinary clinic and Dr. Herbert L. Northrop at the Hahneman Hospital a miscellaneous group.

This seems to be an ideal clinic number and gives evidence of progressive improvement.

THE SURGICAL CLINICS OF NORTH AMERICA

October, 1925, Vol. V, No. 5, St. Louis Number. W. B. Saunders Company.

This number opens with a clinic by Dr. Willard Bartlett of St. Louis, followed by a clinic at the Washington University Medical School and the Barnes Hospital, by H. S. Crossen. Dr. Ernest Sachs presents an interesting clinic on the various types of pathological lesions of the central nervous system that are readily amenable to surgical measures.

In addition we may note an interesting clinic at Barnes Hospital, Washington University School of Medicine, by Dr. Ewarts A. Graham.

EXPERIMENTAL PHARMACOLOGY AS A BASIS FOR THERAPEUTICS

A Textbook for Students and Physicians. By Dr. Hans H. Meyer, Professor of Pharmacology, University of Vienna, and Dr. R. Gottlieb, Late Professor of Pharmacology, University of Heidelberg. Second Edition in English, Translated by Velyien E. Henderson, Professor of Pharmacology, University of Toronto, from the Seventh Revised German Edition; 87 Figures, Partly in Colors and 2 Colored Plates. J. B. Lippincott Co.

This appears to have been a popular book in Germany in that it has passed through seven editions since March, 1910. It seems to be an unfortunate fact that the interest in pharmacology among American physicians is not very great and that the American supply houses are largely depended upon by our physicians to work out the problems in drug preparations and administration. The Journal of the American Medical Association has accomplished much through its Council of Chemistry and Pharmacy in protecting the American physicians from very serious imposition by enterprising pharmaceutical establishments. German physicians have a different conception of the preparation of drugs for the use of the physician.

If we examine chapter one of this work, we will find a rather extended reference to the Pharmacology of the Motor Nerve Endings, including much experimental study of the effects of drugs upon animals.

We shall not undertake a very extensive review of this valuable book but we cannot avoid an expression of opinion that a book of this kind would be of immense value to the practitioner of medicine and be to him an important reference book. We believe that a frequent consultation of the work would give great satisfaction to the doctor in prescribing remedies for the treatment of diseases that come under his notice.

PYGMALON, OR THE DOCTOR OF THE FUTURE

By R. M. Wilson, M.D., Ch.B., Today and Tomorrow Series. E. P. Dutton Co. Price $1.00.

The Doctor of the Future again appears in the entertaining little volume before us. This time the doctor of the future is to be a man of great wisdom, of great learning and great ability, who is able to utilize means of diagnosis to determine if the symptoms presented are indications of real disease or the natural reactions of health. The doctor of the future is therefore able to recognize real disease and to know so much of the reaction of health as to enable him to guard against disease and to direct the reactions of health to the welfare of the patient.

THE ROCKEFELLER FOUNDATION—THE INTERNATIONAL HEALTH BOARD

Eleventh Annual Report, January 1, 1924 to December 31, 1924.

SENSITIZATION

Proteins in the food or even floating in the air are capable of causing no end of trouble to people who are sensitized to them. And this is an alarmingly common experience. Protein sensitization has leaped into prominence as a pathologic entity within the past decade or two. Prior to that time it was scarcely suspected. Now the two questions which patients and physicians are asking are: What particular protein is it that is responsible for the symptoms? And: What can be done about it?

Attenuated protein extracts are available for testing individual susceptibility. They come in powder, liquid and paste form, but are in all cases intended for subdural or epidermal application. Placed just under the outer layer of the skin, they excite a definite reaction when the patient is sensitized to the particular protein represented in the extract.

The ideal extract for the purpose is one that is, in the first place, reliable, and, in the second place, easy to apply. The diagnostic pastes offered by Parke, Davis & Co. strike us as a commendable line; the only apparatus the operator requires is a needle and a few sterile toothpicks. See the Parke, Davis & Co. ad in this issue.

THERMO-TEX BABY BINDERS

Every new-born baby requires a bandage or binder to hold the navel dressing in place, to prevent rupture and to keep the abdomen warm.

The Thermo-Tex binders fulfill these requirements, they are made of pure wool filling, long staple cotton warp and contain no rubber. They have the elasticity and comfort of the Ace bandage, plus the warmth of wool.

The pure wool gives the necessary warmth to the abdomen and, being elastic, the binders conform to the abdominal expansion after feeding. They give the needed support to the navel and prevent rupture.

Thermo-Tex baby binders will not slip and will not hinder respiration. The latter quality is of the utmost importance because the respiration of the new-born is diaphragmatic and a tight and non-elastic binder will make the descent of the abdomen difficult and interfere with breathing.

The binders are fastened, not too tight, either with very small safety pins or basted with a needle and thread. The fastening should be done on one side of the front, preferably on the left. Never fasten in the back.

Thermo-Tex baby binders should be washed with soap and hot water and dried on a flat surface without stretching. The elasticity, which is somewhat lost by steady use, is thus entirely restored. It is

advisable to have three or more Thermo-Tex baby binders, thus permitting a change as open as necessary.

Thermo-Tex baby binders come in sets of three and are made in two sizes: 4 inches wide by 22½ inches long and 6 inches wide by 18 inches long. They are manufactured by Beckton, Dickinson & Co., Rutherford, New Jersey.

NEW AND NON-OFFICIAL REMEDIES

In addition to the articles enumerated in our letter of June 26th, the following have been accepted:

Lederle Antitoxin Laboratories:
Pituitary Extract—Lederle 20 Units.

H. A. Metz Laboratories, Inc.:
Oscodal.
Oscodal Tablets 2 Gm.

H. K. Mulford Company:
Erysipelas Streptococcus Antitoxin—Mulford.

PROPAGANDA FOR REFORM

Benzyl-Viburnum Compound Not Acceptable for N. N. R.—The Council on Pharmacy and Chemistry reports that Benzyl-Viburnum Compound (Benzyl-Viburnum Laboratory, Washington, D. C.) is marketed in the form of capsules. Each capsule is stated to contain 2 grains of benzyl succinate, Viburnum opulus and helonin and powdered ginger root. The name "helonin" has been applied to an extractive preparation derived from false unicorn (Helonias dioica) of indefinite composition. Benzyl-Viburnum Compound is proposed for the treatment of dysmenorrhea and "true asthma". Benzyl esters have been found to be without value in asthma. Cramp bark (Viburnum opulus) and false unicorn (Helonias dioica) have long been constituents of proprietary "female" remedies, but there is no evidence of their efficiency. The trade package contains recommendations for the use of the preparation in painful menstruation and the advertising suggests that the bottle of the capsules may be carried in the shopping bag. The Council concludes that Benzyl-Viburnum Compound is an indefinite complex and irrational mixture, which is marketed with unwarranted therapeutic claims and in a way to encourage its indiscriminate and harmful use by the public. (Jour. A. M. A., August 22, 1925, p. 628.)

Prevention of Mosquito Bites—Numerous preparations have been proposed to be applied to exposed parts of the body to prevent mosquitoes from biting. Among these are oil of pennyroyal, resorcin monoacetate euresol, various forms of petroleum, and powders and washes similar to the following: oil of eucalyptus 25 c.c., talc 50 gm., starch 325 gm., oil of cinnamon 1 c.c., oil of patchouli 1 c.c., oil of santal 4 c.c., alcohol to make 400 c.c. (Jour. A. M. A., July 11, 1925, p. 134.)

The Iowa Radiological and Physiotherapy Society

The Iowa Radiological and Physiotherapy Society will meet at Ft. Des Moines Hotel, Des Moines, Ia., November 11th and 12th. An intensive two day study including papers, clinical talks, motion-picture demonstrations by about twenty-five head-liners in the profession, including Drs. Henry Schmitz, Disraeli Kobak, George B. Lake, Editor of Clinical Medicine, and Dr. A. R. Hollinder of Chicago, Dr. Eugene T. Leddy, associate of Dr. Desjardins of Mayo Clinic, Dr. J. C. Elsom in charge of the Department at University of Wisconsin, Dr. Chas. E. Stewart, Associate Medical Director at Battle Creek, Dr. A. F. Tyler of Omaha, Dr. Lynn B. Green of Kansas City, Dr. Brewer of Lincoln, Nebraska, Dr. Edwin N. Kime of the University of Indiana. Several of our able Clinicians of Iowa and many others will appear on the program. The Banquet at six-thirty, November 11th, will be varied between the best Des Moines musical talent and short addresses from several of our visiting head-liners.

F. L. NELSON, Ottumwa, Iowa
Secretary and Treasurer

T. B. LACEY, Glenwood, Iowa
President

The Journal of the Iowa State Medical Society

Vol. XVI | Des Moines, Iowa, November, 1926 | No. 11

THE CORRELATION OF CLINICAL AND PATHOLOGICAL FINDINGS IN CARDIOVASCULAR DISEASE*

Paul D. White, M.D., Howard B. Sprague, M.D. and T. Duckett Jones, M.D., Boston

Introduction

The study of the correlation of clinical and pathological findings in diseases of heart and aorta is a subject that we may be inclined to slight in our interest in the use of the more modern instruments of precision like the electrocardiograph, the x-ray and the sphygmomanometer. We should pause awhile to consolidate our gains, and to come down to such solid earth as the facts obtained at postmortem examination.

How much have we gained by all our recent studies and researches in our ability to diagnose what is found after death? It is too early to say what our diagnostic ability may eventually prove to be after another generation of concentrated study. It doubtless will continue to disappoint us but there is no question that we should steadily improve in our ability. The present generation has now been at work long enough, in certain regions at any rate, to have profited by the inspiration and teachings of such leaders in the study of cardiovascular disease as Mackenzie, Lewis and Wenckebach. It is of much interest then to see what such a decade or more of cooperative concentration may have accomplished for us. Perhaps some of us in our pride have ridden to a fall but instead of harming us, such realization of our limitations is of the greatest value for further advance.

It is true that to only a certain degree does the analysis of postmortem data cover the field and it is in other directions that much of the recent advance in our knowledge has progressed. We mean that the functional condition of the circulation, which is of such vital importance, is at times in no way evidenced by postmortem data, and even the etiology of the diseases of heart and aorta may fail to be revealed after death where it was evident during life. Auricular fibrillation, hypertension, pulsus alternans, angina pectoris are merely illustrations of important clinical conditions that cannot be diagnosed on the autopsy table. In spite, however, of these definite limitations, the pathological findings after death are of much importance; it is well always to include them in our investigations so far as they can be applied.

Recently Richard Cabot has revived our interest in pathology by his study of the correlation of pathological and clinical data in diseases of the heart and aorta. Although we may not agree with all of the theories that he advances in his book, nevertheless there are a great many facts presented which are well worth our study as they have been his. It is a book to be read, not just the first and last chapters which he recommends because they summarize the rest of the book, but the detailed chapters themselves with the exact findings from which one may draw his own conclusions, not necessarily always the same as Dr. Cabot's. Two criticisms of the book perhaps deserve brief mention at this point and one of these Dr. Cabot himself has expressed. The accuracy of the clinical observations is often open to question inasmuch as sometimes it is necessary to accept the opinion of a relatively untrained interne or of some surgeon who has had neither the time nor the training to detect certain cardiovascular lesions. However, this difficulty is admitted and probably exists in no greater degree at the Massachusetts General Hospital than in most clinics and through the countryside at large. The other criticism is not so obvious at first but we believe it is equally important, and that is that the data given represent only that part of the community which between the years 1897 and 1919 entered the wards of the Massachusetts General Hospital. The findings are not, therefore, necessarily representative of all of New England or of the rest of the country or world. Statistics being gathered in Virginia and other parts of the

*Presented before the Seventy-Fifth Annual Session, Iowa State Medical Society, Des Moines, Iowa, May 12, 13, 14, 1926.

South show differences already from those gathered in New England. We have recently made a study of three thousand cardiovascular cases in New England, one thousand from the hospital, one thousand from general practice, and one thousand from consultation practice. These three groups differ in incidence of types of heart disease and disorders. Altogether they probably do represent the community fairly well. For example rheumatic heart disease is twice as common in the hospital class of patient as in private practice, while angina pectoris and arteriosclerosis are much more common outside the hospital. Eventually when our large hospitals develop further so that they will contain proportionate groups from all classes of society, as the Massachusetts General Hospital is beginning to do, then, but not till then, can we say that hospital statistics represent the whole community.

However, in spite of these few criticisms that we have made of Dr. Cabot's presentation of Facts on the Heart, we appreciate very much the method of study and the many details of cardiac pathology that he has so painstakingly given us. They are of great value.

Present Investigation

Stimulated by this work of Dr. Cabot's in which he analyzed 1906 cases among 4000 autopsied in the twenty-three years between 1897 and 1919, we were led to study the cardiovascular cases that came to autopsy during the last five years, from January 1, 1921 to January 1, 1926, not so much to supplement the report of Dr. Cabot as to compare the correlation of the pathological and clinical findings in this recent period with that of years ago. It is reasonable to suppose, as we have already said, that we should have improved somewhat in our diagnostic ability, not any more because we have more instruments of precision than because we have more time to concentrate on the study of the older methods of examination like history-taking, auscultation, and percussion as well as on the new, like roentgenology and electrocardiography. In fact, the figures have shown that our greatest advance in this particular correlative study has actually been in the more accurate interpretation of murmurs.

We wish to make this recent five year study simply the text for our remarks because in some respects the data are insufficient for a complete discussion, and we shall have to refer to Dr. Cabot's series or to other sources of information occasionally.

A total of 775 cases were autopsied at the Massachusetts General Hospital between 1921 and 1926 and of these 313 showed pathology of the heart or aorta of an extent sufficient to be mentioned in the necropsy diagnoses. Sixteen of these, because of absence of sufficient clinical data, have been excluded, leaving 297 cases to be analyzed. Of these 297 cases 61 (or 21 per cent) showed such slight and unimportant pathology that they may be considered of no significance clinically. They include cases with a little aortic sclerosis or slight coronary sclerosis insufficient to cause coronary narrowing, or very slight so-called "hypertrophy and dilatation" which may mean a few grams of weight above the average for a person of that particular size. The remaining 236 cases include all patients with any endocarditis, pericarditis, definite coronary narrowing, marked aortic sclerosis, luetic aortitis, heart size of 350 grams or more in a person of average weight, or heart size of less in children or small adults if evidently relatively enlarged.

The analysis has been made under four headings, first those cases examined before death by an expert, second those cases examined by the general medical service, third those seen by surgical or other non-medical members of the staff, and fourth those who were moribund when examined. It is obvious that such a subdivision is very important.

Although in discussion we shall consider the pathological significance of certain symptoms and signs we shall use the data here in discussing the incidence of correct clinical diagnosis of (1) cardiac enlargement, (2) valvular disease, (3) congenital defects, (4) pericarditis—acute and chronic, (5) luetic aortitis, and (6) coronary occlusion. Etiology we shall also discuss.

1—Cardiac Enlargement

The entire series of 297 cases has been analyzed in order to try to determine what degree of cardiac hypertrophy it is possible to diagnose clinically with a fair amount of success. Routine x-rays have frequently been available but not always. However, every doubtful case has been x-rayed if at all possible. There are of course some patients in whom, because of obesity or pulmonary hyperresonance, it is impossible to determine the heart size with any degree of accuracy by percussion or by palpation of the apex impulse, but such cases we have found relatively uncommon. We believe that with constant practice and by frequent comparison of one's findings with careful x-ray measurements one can acquire an astonishing degree of accuracy by physical examination. Of course accurate x-ray measurements will in the long run be more reliable than those obtained by percussion or palpation, but the

latter methods are always worth carrying out, not only because it is sometimes impossible or difficult to obtain an x-ray but also because it is important to check the x-ray. Just because the x-ray tube is an instrument of precision does not mean that the x-ray report is always gospel truth. The three errors that may creep into such a report are, first, that the chest may not be exactly placed at right angles to the rays, that is, there may be some rotation and, therefore, a good deal of distortion; second, the chest may not be sufficiently far from the tube to get an accurate teleroentgenogram (if orthodiagraphy is not used); and finally, the figures themselves may be incorrectly transcribed. In other words, one must always be sure that the x-ray report is reliable. Sometimes percussion measurements will actually be more correct.

Measurements by palpation of apex impulse and percussion of the left border should always be compared with a standard more reliable than the nipple line and we believe that the so-called midclavicular line should be used as the normal outer limit for apex impulse and left border of dullness. This correlation compares favorably with the cardiothoracic ratio by x-ray. But not only should the left border of dullness in the fifth or sixth interspace be determined, but also that in the third interspace where it is easily found to be increased in most cases of chronic mitral stenosis even if the apex impulse is little if at all out of place. Except with marked enlargement of heart or aorta, or with pericardial effusion, percussion of right border or of great vessels gives disappointing results and is far inferior to the x-ray. It, however, should always be attempted.

Having digressed thus for a moment to discuss the bases for a diagnosis of cardiac enlargement, we shall return to the data from our series. Although sometimes enlargement is in part due to dilatation as well as to hypertrophy, it is rare that enlargement is due to that alone, and then it is only a temporary condition, as in acute coronary thrombosis where it is either shortly associated with hypertrophy or it disappears with recovery. Thus it is easiest to calculate enlargement pathologically by heart weight and it is on that basis that we shall present the cases of this series now.

Of twenty-eight cases with hearts that weighed 400 grams or more that were seen by cardiovascular consultant, twenty-six were considered definitely enlarged and the other two were doubtful. About two-thirds of the cases were x-rayed. Of the seventy-one patients with hearts of more than 400 grams that were seen by the general medical service, sixty were considered enlarged, three doubtful and eight normal in size. Of twenty-eight cases in the surgical group belonging in this class, twelve were reported enlarged, twelve were considered normal and four were doubtful. Of five moribund cases with large hearts four were called doubtful and one was missed.

With heart weights between 300 and 400 grams six cases were seen by a cardiovascular consultant and three called normal, two enlarged and one doubtful. On the general medical service there were forty-one cases with this heart weight; twenty-two were considered enlarged, one doubtful, and eighteen normal. The surgeons saw thirty-two cases and called twenty-five normal, six enlarged, and one doubtful. And of eleven moribund cases with hearts of 300 to 400 grams in weight, one was diagnosed as enlarged, the others normal or doubtful.

Finally, with heart weights under 300 grams two cases were considered by expert opinion to be normal and two others in children enlarged, as was also the pathologist's belief. Of twenty-nine cases on the general medical service with hearts weighing less than 300 grams, twenty-one were reported normal, one doubtful, two enlarged when they were not, and five slightly enlarged in children or small adults with autopsy confirmation. Of thirty cases of this same group seen in the surgical wards, twenty-five were considered normal and five enlarged. Of six moribund patients with small hearts none was reported as showing enlargement clinically.

At weights above 500 grams the degree of enlargement was fairly well expressed clinically in all the groups. No case with heart weight over 600 grams was missed clinically; three cases with heart weights between 500 and 600 grams were called normal, once on the medical wards and twice on the surgical out of a total of thirty-six cases; three were called doubtful.

The reason why in some of the normal cases cardiac enlargement was wrongly diagnosed was generally inaccurate percussion—the very first slight change in note being accepted instead of the first distinct change—or the palpation of the outer edge of a forceful apex impulse instead of the center of the maximal impulse. We have found that the untrained internes on first entering their hospital service make these errors almost invariably.

The etiological factors behind the cardiac hypertrophy were as in Cabot's series valvular disease, adherent pericarditis, hypertension and unknown causes. The biggest hearts are those resulting from aortic regurgitation, aortic stenosis

and adherent pericardium, and we shall mention the conditions found by Cabot in the seven cases in his series with hearts weighing 1,000 grams or more. There were none so heavy in our series:

1. 1328 grams Mediastino—pericarditis.
2. 1273 grams Mediastino—pericarditis with aortic regurgitation and nephritis.
3. 1158 grams Mediastino—pericarditis with aortic regurgitation.
4. 1150 grams Chronic pericarditis with aortic, mitral and tricuspid endocarditis.
5. 1140 grams Mediastino—pericarditis.
6. 1000 grams Mediastino—pericarditis with aortic stenosis.
7. 1000 grams Aortic regurgitation (luetic).

We should not consider every case of cardiac enlargement or hypertrophy that does not show valvular disease or adherent pericarditis as necessarily hypertensive in origin. Many undoubtedly are, whether or not they do show hypertension at the time. Although this is an attractive theory it needs a lot of proving. Dr. Cabot supports it but admits that there is not yet sufficient evidence to be certain of it. He states that there are some such causes as pernicious anemia back of some cases of cardiac hypertrophy. He also has found coronary arteriosclerosis associated at times with cardiac hypertrophy without obvious hypertension but believes that the association may be incidental. If it is possible for anemia and coronary thrombosis to increase heart weight, about which there is little doubt, it is also possible that coronary disease by increasing the work of part of the heart may in some cases actually increase heart weight. And finally it is quite conceivable that constant increase in cardiac work, either by increased rate or by increased output per beat or both, as in some cases of hyperthyroidism, may after months or years gradually increase heart weight without the need of actual systemic hypertension. We must keep our minds open, we believe, to such possibilities.

Just because a heart both by weight and by clinical study is found to be within normal limits does not mean that it may not have increased in size. Smith and Bloedorn have shown that it is possible for a heart shadow area by x-ray actually to increase 75 per cent from the minimum normal to the maximum normal of the series they studied and still remain within so-called normal limits. This point may be at times of considerable importance.

2—VALVULAR DISEASE

A. *Mitral Valve Disease:*

To go on now to valvular disease, we shall discuss mitral endocarditis first. In Cabot's series over half the cases were not recognized in life and he states that he doubts "if the percentage of success is greater in other institutions or in private practice".

In the present series there were forty-eight cases of mitral endocarditis altogether. Four of these had no deformity of the valve and were not diagnosed; of these four three were acute terminal conditions, one showed no murmur at all and one showed a loud systolic murmur associated with pernicious anemia. Of the forty-four cases with deformity of the valve, eleven were not diagnosed. Three of these eleven cases were moribund and all three showed well marked stenosis at autopsy. Four of the eleven cases were surgical patients and two of them had stenosis. Clinically recognizable and clinically important mitral stenosis in a heart of average size we have considered to exist when the mitral valve has a circumference of 7½ cm. or less. The other two surgical cases and the four medical cases that were not diagnosed all had valve circumferences of more than 7½ cm. One case with stenosis was diagnosed correctly on the surgical service and two others were questioned. Of the twelve cases diagnosed as mitral disease by the general medical service eight had valve circumferences of 7½ cm. or less, and were correctly diagnosed as stenosis, one with diastolic murmur alone and seven with both diastolic and systolic murmurs. The other four had circumferences of more than 7½ cm. and three were associated with chronic pericarditis and ventricular dilatation; mitral diastolic murmurs were present in all four and so a diagnosis of mitral stenosis was made in each case. It is likely that the cardiac dilatation associated with the pericarditis in three of the cases was responsible for the diastolic murmur. It has been demonstrated by various investigators in the past, notably by Austin Flint, that chronic mitral narrowing is not necessary for the production of an apical middiastolic murmur with or without presystolic accentuation. The mechanism of this murmur has been variously explained but it is probably the left ventricular dilatation that is responsible whether this dilatation results from aortic regurgitation, adherent pericarditis or other cause. The fourth case had large vegetations on the mitral valve which probably obstructed the blood stream.

The principles governing the production of murmurs should be considered for a moment here. The most important factor is the difference in caliber between the valve or other opening and the chamber or vessel into which the current of blood is being forced. With stenosed

valve and normal ventricular cavity there will be during diastole a murmur, if the blood flow is fast enough. Likewise with normal or only slightly narrowed valve and dilated left ventricle there may be a diastolic murmur, in the case of aortic regurgitation called the Austin Flint murmur. Finally the pressure behind the blood stream and the resistance in the chamber receiving it are also important factors in murmur production. Thus in a moribund patient with well marked mitral stenosis the sluggish blood flow may cause the mitral diastolic murmur to disappear.

To return now to the cases of mitral disease, there were eighteen remaining in whom expert opinion was given. None was missed. All were diagnosed either mitral stenosis, mitral regurgitation or both, according to the finding of mitral diastolic or systolic murmurs. Seven of the eight with valve circumferences of less than 7½ cm. showed middiastolic murmurs at the apex but so did seven out of ten cases with valve circumferences of more than 7½ cm. Of these seven latter cases, five showed either ventricular dilatation associated with chronic pericarditis or large acute vegetations at the edge of the valve opening, which may explain the murmur. Four of the eighteen cases showed a mitral systolic murmur alone, but because of other findings—rheumatic history, enlargement of heart and intensity of murmur, it was believed that organic mitral regurgitation was present, as it proved to be. One other case was diagnosed mitral stenosis but proved to have only an Austin Flint murmur.

We object to the extreme swing of the pendulum away from the old view that the apical systolic murmur was of some importance and meant mitral regurgitation, often organic, to the modern view that it is of no importance and never means organic mitral regurgitation. It seems more rational than either extreme view to consider all loud apical systolic murmurs of some importance, even if they usually do not mean organic mitral disease. They at least generally signify ill health or heart disease of some sort, being indicative of dilatation perhaps with infectious disease or anemia, or as the result of cardiac weakness in chronic hypertension, coronary disease or some such condition. Most loud apical systolic murmurs are intracardiac in origin and doubtless due to actual regurgitation, but usually not organic. Although, as Cabot says, organic mitral regurgitation, rheumatic in origin, without stenosis, is rare in adults, it is not very uncommon in children and as the result of years of study of the development of chronic rheumatic mitral disease in children in the heart clinic at the Massachusetts General Hospital, we have grown to respect more and more a loud apical systolic murmur constant from month to month and year to year in children who have had rheumatic fever or chorea and who show slight cardiac enlargement. In these children one is apt to hear after a few years a mitral diastolic or an aortic diastolic murmur develop in addition to the mitral systolic murmur. Of course many apical systolic murmurs are certainly functional, being transient in these children during fever or poor health. Much judgment has to be exercised in their interpretation but because these youngsters do not die of their slight mitral disease does not mean that such disease is non-existent. The evolution of the cases seems to prove its existence, and even post-mortem examination in rare instances discovers the condition. Probably experience with many young children in a region with much rheumatic infection is necessary to develop one's interest in this possibility.

Aside from rheumatic etiology of the mitral disease in the present group bacterial endocarditis was the only other cause noted, save for one case of arteriosclerosis..

B. *Aortic Endocarditis:*

Disease of the aortic valve if it causes deformity, so that there is either stenosis or regurgitation, is easier to diagnose than mitral disease. There were in the present series ten cases of aortic endocarditis without deformity and all were missed clinically. Of nineteen cases of deformity of the valve only three were missed, one a moribund patient with aortic regurgitation and the other two surgical cases with regurgitation. One case of the seven seen by the general medical service alone was missed. None of the ten cases on which special opinion was asked was overlooked. All three cases with aortic valve circumference of 5 cm. or less—i. e., well marked aortic stenosis—were diagnosed as stenosis, and there was one more so diagnosed who had a circumference of 5½ cm. These four cases had aortic diastolic as well as aortic systolic murmurs. The remaining twelve cases diagnosed clinically as aortic regurgitation alone all showed deformed valves with circumference of 5½ cm. or more.

It should be noted that in this series no functional aortic regurgitation was diagnosed clinically though such a condition is possible rarely. Once a Graham Steele murmur was questioned but aortic regurgitation was found postmortem.

The etiology in nearly all the cases here was either rheumatic or luetic with rare cases of un-

known cause with sclerotic valves, perhaps due to arteriosclerosis or perhaps as Cabot suggests to some type of infectious aortic endocarditis which recovers – as contrasted to the usually fatal streptococcus viridans endocarditis.

In the whole group of twenty-nine cases both acute endocarditis and chronic endocarditis are included—the former more common in the non-deforming valve lesion.

C. *Tricuspid Valve Disease:*

There were eight cases of well marked tricuspid valve disease in the series, four with deformity and four without. Not a single case was diagnosed clinically. The one case of real tricuspid stenosis with valve circumference of only 5½ cm. was moribund on entrance to the hospital and the lesion was missed, although both aortic stenosis and mitral stenosis which were also present were diagnosed correctly. The only case in the entire series of 297 cases thought to show possible tricuspid stenosis in addition to well marked aortic stenosis and slight mitral stenosis showed at postmortem examination only aortic stenosis.

It is rarely possible to diagnose tricuspid stenosis but generally when it is present it is masked by either aortic stenosis or mitral stenosis, and so likely to be missed. We have diagnosed the condition twice correctly but on several occasions have made errors both of omission and commission. Tricuspid regurgitation is a frequent functional condition—as an organic condition it is even harder to diagnose than tricuspid stenosis. Rarely one may guess correctly.

The failure to diagnose tricuspid valve disease in this five year series is in accord with Cabot's findings when of thirty-three cases in twenty-three years only one was even suspected.

Rheumatic endocarditis is almost invariably the cause of tricuspid valve disease.

D. *Pulmonic Valve Disease:*

Much rarer and as difficult as tricuspid valve disease to diagnose is acquired pulmonic endocarditis. Only one case occurred in the present series—terminal vegetative endocarditis due to the staphylococcus aureus associated with myocardial abscess (not diagnosed), purulent pericarditis, and pneumonia, and complicating a chronic osteomyelitis. The pulmonic valve measured 6 cm. in circumference. Its involvement was not diagnosed. Cabot found four cases of pulmonic endocarditis in his series and only one was diagnosed during life.

3—Congenital Defects

Congenital pulmonic stenosis can at times be diagnosed by the harsh systolic murmur and thrill over the second intercostal space close to the sternum, often associated with cyanosis and clubbing of the fingers in a child. At other times the signs are less sure and as in the case of other congenital defects the diagnosis is sometimes impossible. There was no case of congenital pulmonic stenosis in the present series, but there were a number of babies with patency of the ductus arteriosus, in one case associated with interventricular septal defect and cyanosis. However, no characteristic murmurs were found in these infants and no case was correctly diagnosed. Probably the patency of the ductus arteriosus was in most instances unimportant, the vessel remaining open for a few weeks or months after birth but destined to close before a year or two, had not some infection or accident caused the infant's early death.

4—Pericarditis

Pericarditis, especially in its chronic form, is the only important cardiovascular condition besides uncomplicated luetic aortitis that is usually missed during life. This fact has long been known and has been again recently emphasized by Cabot. And yet we cannot seem to remember to consider it as we should in every case of cardiac enlargement of unknown cause or where the heart size is out of all proportion to the degree of valvular disease or hypertension. There are very few helpful signs, except perhaps the chronic ascites that occurs in some cases of mediastinopericarditis. Sometimes failure of the heart to shift with change in position of the body is helpful.

However, in spite of all methods of study, of twenty cases of chronic adhesive pericarditis in this series only a single one was diagnosed correctly and that one out of the seven seen by a cardiac consultant. Four other cases were questioned, two by the consultant and two by the general medical service. Four cases were missed by the consultant, nine by the general medical service, one by the surgeons and the other case that was missed was moribund. All seven cases with enlargement of the heart and no other causes for it than the pericarditis were missed. Two of the hearts weighed less than 400 grams—they were both missed.

Of thirty-one cases of acute pericarditis ten were correctly diagnosed during life and one other was considered possible. Of the remaining twenty, eleven were moribund at the time of the occurrence of the pericarditis. In these, as in several of the others, the process was very slight, there being a little cloudy fluid in the pericardial sac with flakes of fibrin or hemorrhages in the

pericardial membranes. Most of the cases with "bread and butter" processes were correctly diagnosed.

The etiological factors of the acute pericarditis we know better than we do those of the chronic adherent pericarditis. Acute rheumatic infection undoubtedly accounts for a certain number in each group. The remainder in the case of adhesive pericarditis are of unknown origin and are usually not associated with valvular disease. In the case of acute pericarditis septic processes are responsible for the remainder, for example, pneumococcus, staphylococcus or streptococcus infection.

5—Luetic Aortitis

As Cabot has said, we do not know how often luetic myocarditis occurs but as a clear cut condition either pathologically or clinically it certainly is not common. Therefore, the ordinary luetic cardiovascular manifestation is aortitis with or without aortic regurgitation or aortic aneurysm.

In the present series there were twenty cases of luetic aortitis, a percentage of slightly less than seven. Of these twenty, fourteen showed neither aortic regurgitation nor much aortic dilatation. In fact two or three required microscopic examination for diagnosis. All were missed clinically, except two which were questioned as the result of x-ray findings. All of the four cases with aortic regurgitation were diagnosed correctly and of the two cases with aneurysm one was correctly diagnosed during life and one was questioned. Cabot and others have shown that even x-ray interpretation may be wrong if there is no pulsation in the aneurysm; it may then be mistaken for mediastinal tumor of other nature. One case of the present series which was diagnosed as luetic aortitis with aortic regurgitation proved to be subacute bacterial endocarditis; the x-ray had reported normal aorta but was disregarded in the presence of angina pectoris and positive Wassermann reaction.

6—Coronary Occlusion

The most marked evidence of coronary arterial disease comes with acute occlusion of a large vessel, but symptoms and signs may certainly be produced by lesser grades of sclerosis. Limitation of cardiac reserve and beginning congestive failure in old age with no history or present evidence of hypertension, pericarditis or valvular disease, intraventricular or high grade auriculoventricular block, very low voltage or marked abnormality of the T deflections of the electrocardiogram, marked generalized arteriosclerosis and the suggestive evidence from the finding of aortic tortuosity by x-ray all indicate the probability of coronary sclerosis as a clinical entity. Cabot minimizes the condition chiefly because in his hospital statistics he does not find the numerous old cardiac cripples who do not go to the hospital but prefer to consult their family doctor and eventually die at home. Although hypertension is often an additional factor in causing heart failure in these old people it is not the only factor and often it is absent.

If coronary occlusion with thrombosis is sudden and extensive enough it should be diagnosed clinically but often the occlusion is so gradual or slight that it may pass unnoticed and death result from other cause. Of five cases of marked occlusion (almost or wholly complete) in the present series, three cases were diagnosed during life, one was questioned and one case was obviously so slow in development (by sclerosis) that it was not considered. One other case of acute thrombosis of a small coronary branch was missed.

Of nine cases of chronic partial coronary occlusion of considerable degree only one was definitely diagnosed, one was questioned, and seven were missed, although arteriosclerotic heart disease was diagnosed in several of the latter.

Summary

1. A study has been made of the correlation of pathological and clinical findings of cardiovascular disease in 297 cases (out of 775) autopsied at the Massachusetts General Hospital in the five year period from 1921 to 1926. The chief object of this study was to determine our ability to diagnose pathological conditions and to determine whether or not we are more able to diagnose accurately such conditions than we were twenty-five years ago.

2. On the whole with certain exceptions, notably chronic adherent pericarditis and uncomplicated luetic aortitis, our ability to diagnose cardiac disease depends on the extent of the disease. Thus very slight cardiac enlargement, slight aortic and coronary sclerosis, slight non-deforming valvular disease and slight terminal acute pericarditis are practically always missed and are probably not diagnosable.

3. Cardiac hypertrophy sufficient to increase heart weight to 400 grams or more in an adult of average size should be diagnosed almost invariably. In difficult cases x-ray measurements may be necessary to make the diagnosis. Moribund state and careless hasty examination are the chief causes of error.

4. Valvular disease involving the mitral and aortic valves either alone or in combination

should be diagnosed in nearly every case provided the valves are deformed. Deformity is the rule. The greater the degree of stenosis (in the case of the mitral valve 7½ cm. circumference or less, and in the case of the aortic valve, 5 cm. circumference or less), the easier is the diagnosis.

5. Valvular disease involving the tricuspid and pulmonic valves is almost never diagnosed.

6. Congenital cardiac defects in babies are often missed.

7. Chronic adhesive pericarditis is rarely diagnosed correctly. It should be looked for more often than it is.

8. Acute pericarditis is often missed partly because it is very slight or terminal, and probably because at times there is no friction rub or other sign to call attention to it.

9. Luetic aortitis is almost never diagnosed unless it is associated with aortic regurgitation or aneurysm. It should be sought for more carefully.

10. Acute occlusion of a large coronary artery should be diagnosed almost always. Gradual or slight occlusion may produce no symptoms and few or no signs. Arteriosclerotic heart disease is probably a common type.

11. Hypertrophy of the heart not produced by valvular disease, chronic adhesive pericarditis or proven hypertension needs more study and analysis of cause.

12. Advance in recent years in the diagnosis of heart conditions has not only included functional disturbances, like auricular fibrillation and flutter and hypertension, but also etiology like coronary thrombosis and subacute bacterial endocarditis, and appears even to be accompanied by greater accuracy in the diagnosis of mitral and aortic valve disease and of cardiac enlargement.

HYPODERMOCLYSIS*

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There are many indications, preoperative as well as postoperative, where it is essential that fluids be pushed, both from the standpoint of food value contained in the usual mixtures, and of the water and salts. This is particularly true in marked dehydration and in conditions of shock. Of the various routes available, aside from fluids given by natural channels, hypodermoclysis has the greatest factor of safety for the following reasons:

(1) The ease of application of the method.

(2) The ease of preparation.

(3) The greater factor of safety.

Prophylaxis though, is very important, for with prevention may come the entire cure; so additional therapy may be uncalled for, or at least the amount of therapy necessary be greatly reduced. It is with this in mind that I wish to stress first, the idea of

PROPHYLAXIS

Every surgical case should have a thorough physical examination and history of past and present illness. It is only by this means that the patient's weaknesses will be ascertained beforehand. In the physical examination should be included particularly blood-pressure, careful urinalysis including albumen, sugar, microscopic examination and kidney function tests. If possible blood chemistry should be undertaken if there are any indications calling for it. Unless the operation is urgent, the patient may spend several days in judicious preparation, building up his resistance by properly prepared diets and ample carbohydrates to prevent acidosis and liver damage at the operating table. If a bleeder, proper hemostatic agents may be administered and if anemic, proper therapy can and should be administered. This includes blood transfusion in marked anemia. If a glycosuria is present the judicious use of diet or insulin to render him sugar free and prevent acidosis has proven of inestimable value. Fluids can then be pushed by the natural channels if dehydration is present. Improper use of preoperative catharsis has caused many patients gas pains and postoperative complications. At the time of the operation a minimal amount of anesthesia will prevent liver damage and postoperative acidosis, with the accompanying vomiting and dehydration. These measures of precaution are of value as prophylactic measures.

NATURAL ROUTES

Nature originally intended that man should take his fluids by mouth, so the closer we can adhere to normal physiology the better the therapeusis. So, if the patient can take water by mouth, that should be the route of choice. Fluids are rapidly absorbed from the intestines and fluids can be pushed by mouth to take care of the ordinary emergencies. In case of vomiting or coma where mouth feeding cannot be resorted to, rectal feeding is the next choice. As much as three liters a day can be so absorbed. Next to rectal feeding I would place hypodermoclysis and the last route in necessity is the intravenous method.

*Read at Iowa Lutheran Hospital Staff Meeting, Des Moines, Iowa, June, 1926.

In the first place, solutions given by mouth do not have to be sterilized and rendered isotonic; this also holds for rectal feeding, for before absorption from mucous membrane there is osmosis, and the body makes its own isotonic solutions.

Crile, in his volume on Surgical Shock, mentions that saline infusions are given intravenously and subcutaneously. Their limitation is seen in the action of the intravenous infusion, for if normal saline be given to an animal at a slow or at a rapid rate in excess amounts until death—two outstanding facts are noted:

(1) Normal blood-pressure is not raised.

(2) The animal dies from asphyxia due to a mechanical fixation of the abdominal muscles, the lower ribs and the diaphragm. This fixation is caused by a vast accumulation of saline solution in the walls and lumina of the stomach and intestines, water runs out of the circulation, through the areas through which water is normally absorbed, as rapidly as it enters. The blood can not be more than momentarily diluted by normal saline. The value of normal saline is therefore hopelessly limited. Water is of great value—of most value when it is absorbed from the alimentary canal. The normal method of induction, therefore, is by the stomach or through the mucous membranes by the Murphy drip. The administration of water by these methods produces no overloading, the rate of absorption is not excessive and the results are good. Water given intravenously is rapidly eliminated from the body. Water passing through mucous membranes or absorbed from the tissues, is retained and utilized to a far greater extent.

Technique of Injection

Intravenous injections require more skill and time of preparation. Due care must be taken that the fluid enters the blood stream at about body temperature to prevent untoward reaction. Again care must be taken that no air enters the vein. Small veins may be hard to get into without submitting the patient to a minor operation. So much care need not be exercised in the hypodermic route. Normal saline solutions this way rarely ever cause reaction. There are some salts though, like sodium bicarbonate and calcium chloride which would cause tissue reaction locally if given hyopdermically, so must be given by the intravenous method. Even in this instance it is the liquid rather than the salt which is of benefit.

Acid-Base Balance of the Blood

Yandell Henderson in the Physiological Review of April, 1925, thinks that the condition chiefly determining the extent of withdrawal of alkali or its return to the blood, is the freedom with which sugar is oxidized in the tissues. Amongst the essential factors are an adequate supply of sugar, an ample supply of oxygen and sufficient insulin to facilitate the process. In the dynamic equilibrium of this process the mass action of oxygen is balanced against the mass action of bicarbonate ions, and H-ion concentration is a valuable dependent upon the ratio of oxygen to bicarbonate and tending to restore that ratio to normal by shift of alkali from blood, and vice versa. This form of buffering occurs in the tissues, muscles mostly, and consists mostly of proteins serving as weak acids combined with inorganic alkalies. This condition would be analogous to the hemoglobin-alkali which is the chief factor in buffering the blood. Solutions given hypodermatically which are not strictly isotonic would be buffered in the muscles and subcutaneous tissue before entering the blood stream so that reactions would be prevented more than in giving similar solutions intravenously.

Effect on Spinal Fluid Pressure

Howe in the Archives of Neurology and Psychiatry for September of last year mentions that in 1920 Foley and Putman confirmed the original work of Weed and McKibbon and also demonstrated that the introduction of hypotonic solutions in the gastrointestinal tract would produce similar results as by the intravenous route. They advised administration by this route for this purpose because of the convenience of this method and its safety. Disturbances of circulation and respiration were frequently encountered on intravenous injection and were avoided when given by other routes.

In cats, sodium chloride was found to produce the greatest changes. Ten c.c. of a 25 per cent sodium chloride solution intravenously in this animal caused a marked rise of pressure during injection, followed by a prompt and sharp fall which went to zero pressure in twenty-five to thirty minutes. Unless the injection was made slowly respiratory disturbances were observed as well as cardic irregularities and convulsions. These may be noted when no more than 1 to 2 c.c. have been injected. Sudden cessation of respiration and death has been noted to occur. These toxic effects have been noted by practically all observers who have done experimental work along this line. It is the consensus of opinion that this danger is mainly obviated by very slow injection.

Weed and Hughson used a concentrated solution of salts in the proportion used in Ringers

solution, in which sodium chloride, potassium and calcium chloride were twenty times the concentration of the normal saline. This gives a sodium chloride concentration of 18 per cent. With this solution the authorities found no toxic effects. Three and seven-tenths gm. of sodium chloride per kilo body weight is known to be lethal. Sodium chloride is toxic to protoplasm, and a frog's heart profused with an isotonic solution looses its excitability and ceases to beat. Calcium restored this relaxation though it was imperfect until potassium was added. These salts should be added to the usual saline infusions.

H-ion Concentration Studies

Williams and Sweet in the J. A. M. A. of April, 1922, made a study of the hydrogen-ion concentration of salines used intravenously in their relation to untoward effects. It has frequently been observed by clinicians that the intravenous glucose, physiological saline, phenosulphophthaline and other solutions have been followed by reactions with varying frequency. The patient in a few minutes to an half hour is seized with a chill and a rise in temperature, followed by prostration and weakness, and maybe dyspnœa and cyanosis. This reaction tends to disappear in twenty-four hours, though there is reason to believe that death occasionally results. Similar reactions have followed citrate infusions and arsphenamine. They thought that when fluids of a higher or lower concentration than that of the blood were introduced into the circulation at a rate or in an amount in excess of the ability of the blood to buffer or neutralize them, then reaction will follow.

Ph of pure distilled water	7.
Ph of normal acid	2.
Ph of normal alkali	14.
Ph of human blood	7.5 to 7.3
Constant	7.4

Concentration above or below this is incompatible with life. A patient becomes comatose before a ph of 7. is reached and has convulsions before ph 7.5. The proteins, plasma bicarbonates, and phosphates in the blood are the buffer substances which maintain a fairly definite blood reaction and guard against injury. Particularly, nerve and brain tissue are extremely sensitive to changes in chemical reaction. Fluids with an abnormal ph may temporarily produce an acidosis or alkalosis when introduced into the blood. These authors made an examination of the commoner things used in infusion with following results.

Tap water on various days the ph ranged from 8.27 to 8.77 when taken from various faucets. Fresh unheated tap water with a ph 8.27 when boiled five minutes at atmospheric pressure had a ph of 8.30 and after ten minutes ph 8.62. When autoclaved twenty minutes at fifteen pounds pressure, ph 7.74. Tap water is mildly alkaline owing to dissolved dibasic salts and boiling or autoclaving raises the ph because of changes in the amount of dissolved gases and salts induced by heat and pressure.

Distilled water when fresh and pure has a ph of about 7. but it is impossible to keep it so because it absorbs carbonic acid gas from the air. An analysis made of a number of samples in one hospital ranged from ph 6.89, 6.0, 5.05 and 5.84.

Simple and double distillation with an all glass still gave tap water at the start with a ph of 8.27. The distillate of the first 10 c.c., ph 7.30 and after 200 c.c., ph 6.90. On the second distillate after the first 10 c.c., ph 6.99 and after 200 c.c., ph 6.80.

Double distilled with glass stoppered bottle with paraffin ph 6.80; after twenty-four hours, ph 6.83; after thirty-one hours, ph 6.25; after forty-eight hours, ph 5.23.

Double distilled water with paraffined cotton plug ph 6.80; after twenty-four hours, ph 6.90; twenty-seven hours, ph 6.50; forty-eight hours, ph 5.32.

Double distilled water with a clean cork ph 6.80; after twenty-four hours, ph 7.05; thirty-one hours, ph 6.14; after forty-eight hours, ph 5.60.

Double distilled water, cotton plug, away from chemical fumes ph 6.8; after twenty-four hours, ph 7.07; thirty-one hours, ph 6.41; after forty-eight hours, ph 5.75.

Double distilled water near concentrated hydrochloric acid ph 6.80; after twenty-two hours, ph 6.98; after twenty-nine hours, ph 6.19; after forty-six hours, ph 6.04.

Double distilled water near concentrated ammonium hydroxide ph 6.80; after twenty-two hours, ph 6.60; after twenty-nine hours ph 7.02; after forty-six hours, ph 6.12.

Glucose in a 10 per cent stock solution in distilled water, fresh and unheated has a ph of 6.20; after boiling ten minutes, 5.47, and after boiling thirty minutes, 5.00. The same solution with a ph of 6.20 when left standing in the laboratory at room temperature for twenty-four hours, ph 5.15, and after forty-eight hours, ph 4.15. Repeated tests have shown that when glucose is heated or unheated it rapidly becomes acid with age, so after twenty-four hours, if even unheated

it is unsafe for use. The autoclaved product even with alkaline water is far too acid for safe use, clinically. For this reason when glucose solutions are used they should have buffer tablets of monopotassium and dipotassium phosphate added to protect them.

When buffer tablets were used no reactions were observed by the authors. A properly buffered glucose solution will retain its ph for forty-eight hours or longer. In preparing a glucose solution for use it should be thoroughly dissolved, filtered and autoclaved. The sterile buffer tablets are then added because if added before, they are likely to be precipitated out of solution with the result that the solution again becomes acid. When the common method of making physiological sodium chloride is prepared by dissolving C. P. sodium chloride in a stock distilled water, a highly acid solution will result which may prove harmful in clinical use. Tap water is preferred to distilled water and rendered perfectly safe by buffering with the proper salts.

Bacteriology

Bourn and Seibert in the American Journal of Physiology of February, 1925, have isolated what they call a pyrogen from distilled water. This is associated with bacterial growth in distilled water and will cause the reactions noted following infusions. This pyrogen is slowly destroyed by heat; autoclaving for fifteen to twenty minutes will not destroy it. Heating it with either acid or alkali does destroy the pyrogen. It may have a nitrogenous nature, it will cause anaphylactic and shock reaction, experimentally, and in rabbits has been shown to cause the formation of agglutinins in the blood, and it has been demonstrated to cause chills and febrile reactions in man when given intravenously. The bacteria associated with this reaction are chromogenic, do not seem to liquify gelatin, and produce alkalinity in milk. They have isolated four groups with four grades of toxicity.

Dyes

Smith in the Johns Hopkins Bulletin of May, 1925, working with vital red found that after it was injected it stained the plasma for several days. After injection and after he cannulized the common duct he found it shortly appeared in the bile fifteen times stronger than in the plasma. After twenty-four hours, one-fourth was excreted through the bile while the plasma only had 10 per cent of the original content. The dye did not appear in the feces and seemed to be fixed by the bacteria in the intestinal canal. It was not thrown out through the skin, but when isolated, was found in the subcutaneous tissue, the Kupffer cells in the liver and in the center of the lymph nodes. Crystals were found in the convoluted tubules of the kidney though none of the dye was seen in the urine. It was not taken up by the leucocytes of the blood and was taken up by elastic tissue especially by the aorta. Some of the dye was eliminated directly from the blood to the lymph.

Effects of Intravenous Therapy

Hanzlik in the Archives of Internal Medicine for October, 1925, draws the following conclusions:

Intravenous injections in dogs of small and large amounts of the following agents and solutions caused definite and important changes in arterial blood, accompanied as a rule by disturbances in physiological function: 10 per cent NaCl, 85 per cent sucrose, 50 per cent dextrose, 18 per cent urea, .1 per cent agar, 6 per cent and 25 per cent acacia, 5 per cent gelatin, 3 per cent barium sulphate, .5 per cent Fullers earth, 5 per cent copper sulphate, .9 per cent CaCl2, 21.7 per cent NaI, 50 per cent Na salicylate, .33 per cent arsphenamine and 5 per cent peptone.

The principal changes are (a) a considerable though variable dilution immediately after the injection except with barium sulphate, peptone, and histamine which tended to cause concentration or prevent dilution. (b) A tendency to acidosis by considerable lowering of the ph values, a reduction from 7.3 or 7.2 to 6.8 and 6.9 and the lowest 6.6. Changes from the original were influenced by ether anesthesia, collapse, etc. With some reagents the changes were temporary, with others permanent. (c) Accompanying the tendency to acidosis there usually was a reduction in the carbon dioxide (total and alkali reserve) of the plasma and the reduction appeared to be chiefly a function of the blood dilution. Since the concentration of the total carbon dioxide was reduced, the reduction in ph was not due to carbon dioxide and presumably not due to the small amounts of blood withdrawn to make the tests. (d) Of the fixed acids, lactic acid was greatly increased when the ph was lowered and it appeared to be concerned with the tendency to acidity in part, at least. Total phosphates were inconstant or variable. (e) Ammonia was frequently increased with the increase of lactic acid. Sugar showed unimportant changes and remained constant or showed unimportant fluctuations even after injection of 18 per cent urea. (f) Darkening of the blood together with an increased sedimentation rate, agglutination and hemolysis occurred after agar, acacia, urea, gel-

atin, barium sulphate, Fullers earth, arsphenamine, copper sulphate, NaI, Na salicylate, except that there was no hemolysis with the iodine and salicylate and no agglutination with urea.

Darkening and agglutination occurred with dextrose; darkening with phosphate, and agglutination with histamine, hemolysis with .1 per cent and 10 per cent NaC1. Reduction or inhibition of increase in sedimentation rate was observed with calcium C1, NaHC03, Na phosphate. These phenomena indicate surface changes in and injury to the corpuscles.

Disturbances in physiological function were indicated from changes in blood-pressure, pulse, respiratory rate, ranging from moderate to profound and frequently resulting in collapse and death. Tremors, twitching of muscles and sometimes convulsions were observed, together with occasional increases in temperature in morphinized dogs, salivation and diuresis. Death occurred from injections of 40 per cent urotropin, hexamethylenamine and sucrose, acacia, agar, copper sulphate, arsphenamine, Fullers earth. Calcium chloride, preceded by acacia, and NaC1, peptone, NaI, and salicylate. The blood and symptomatic changes were not due to the removal of small quantities of blood for analysis and were therefore due to the injections themselves. Induced asphyxia which was used as control of the method of estimating ph invariably lowered the ph values causing a tendency toward acidity. Lowering of ph values of the blood did not occur or occurred only irregularly after the injection of .9 Na C1., (ph and C02 lowered in two out of five experiments) used as a vehicle or solvent for various agents that were injected—one per cent NaC1 and Tyroles sol. Increases in ph (alkaline tendency) occurred after 1.5 and 5 per cent disodium phosphate, 9 per cent NaHC03 and 2 per cent citrate though some dilution and some or no reduction in C02 (except after NaHC03 which increased it) of the blood occurred. Lactic acid tended to be augmented in alkaline bloods after the phosphate, bicarbonate and citrate, while ammonia tended to decrease. These changes were produced independently of respiration and resulted from direct contact of the solutions and agents with the blood and tissues.

So it is suggested that the basis of the blood and the symptomatic changes that were demonstrated and which resulted from contact with a variety of agents, physically and chemically unrelated, rests fundamentally on disturbances in important physical and chemical mechanisms of the blood and the tissues.

CONCLUSIONS

So unless the above conditions are taken into account in the therapy of our patients, with the attendant danger of using solutions which are not properly prepared or tested, or which may properly not react with the body and in so doing cause untoward symptoms, it is better to use the normal channels, as the mouth and rectum and then failing, the hypodermic route, and last, if necessary and the above conditions outlined in the paper having been met, the route may be taken intravenously.

INFLUENZAL MENINGITIS

M. L. TURNER, M.D., Des Moines

Jack K., born November 21, 1919. Apparently normal child. Had several attacks of cold with fever. During these periods has had convulsions.

Mother states that he had five convulsions from one and one-half years to three and one-half years old. He had his tonsils removed when he was four years old and has not had a convulsion since that time.

He had been quite well until February 19, 1926. At that time seemed indisposed with slight fever. On the twenty-first, two days later, he developed a rash and was seen by Dr. McMahon, the grandfather, who diagnosed his condition as German measles.

He must have had measles for a brother who had no other opportunity of exposure developed measles two weeks later. We were having an epidemic of measles at that time.

Jack's temperature kept up and on the morning of February 24 at two a. m. he developed a convulsion.

As Doctor McMahon lives fifteen miles in the country, I was called to see him. I found him still having convulsive motions more pronounced on the left side. His temperature was 103, neck stiff, Kernig present, pupils dilated and reacted very slowly to light.

I was suspicious of meningeal difficulty, but with the history of previous convulsions thought we might be dealing with convulsions of similar etiology.

I saw him again the same morning with Dr. McMahon. Muscular spasm had subsided, but retracted and stiff neck were still present, as was the Kernig and eye symptoms.

We decided on a lumbar puncture and at 2 p. m. Dr. Simmons removed about 30 c.c. of

turbid fluid. Suspecting that it might be epidemic form of meningitis, we had provided antimeningococcus serum and introduced 25 c.c. before removing the needle. The appearance of the fluid made us feel quite confident that we were dealing with epidemic meningitis.

Doctor Simmons examined the fluid and found no evidence of the epidemic form, but did find a small baccillus which we decided was influenzal type.

The patient seemed clear mentally, and at all times would respond to questions without hesitation.

The general condition and symptoms remained the same until February 28, four days later, when he was seen by Dr. Ely and another lumbar puncture was made. The same type of fluid was obtained. A culture of this was made on blood agar and the influenza bacillus grown.

The improvement in this case was uneventful and gradual. The temperature reached normal on the seventeenth day. On the fifth day he developed a serum rash. He did not walk for four weeks.

Aside from the lumbar puncture, no treatment was given, except good nursing and one grain doses of acetyl salicylic acid, every three hours.

Our excuse for presenting the case is the fact that he recovered without visible evidence of sequella. The mortality in influenzal meningitis is very high.

In 1911, Holt reported four cases all of which died, and he made the statement then that death was the almost invariable termination.

The same year Dr. David Davis reported seven cases in Chicago. They all proved fatal. All were infants. Oldest was thirteen months, the youngest five day twins.

In the same year Wollstein reported seven cases all of which died. In reviewing the literature at that time, she collected forty-nine cases with only five recoveries.

In 1922 Rivers of Baltimore reported twenty-three cases with twenty-two deaths. In reviewing the literature at that time he reports 220 cases since 1898 with only seventeen recoveries. A mortality of 92 per cent.

Bacteriological Report on Spinal Fluids of Jack K.

First Specimen, February 24, 1926:

The fluid is definitely cloudy and under increased pressure.

Cells were in excess of 500 per cu. mm. and the globulin was definitely increased.

In the centrifuged specimen pus cells were present in large numbers but stained with methylene blue, no bacteria were found.

In a second smear stained with analine gentian violet many intra- and extra-cellular, very small, thin bacilli were found.

Cultures on plain agar and on Loefflers blood serum media revealed no growth on seven days incubation at 37 degrees C.

Diagnosis: Purulent meningitis probably from the influenza bacillus.

Second Specimen, February 28, 1926:

The fluid was of the same physical appearance as that of the earlier date.

In smears made from the centrifuged specimen, stained with analine stains a small rod shaped, delicate organism was found. The organisms were, for the most part, intracellular. In size, shape and grouping they resembled the Pfeiffer bacillus.

Cultures were made on plain agar, Loefflers blood serum, and fresh blood agar.

On the fifth day of incubation colonies of macroscopic size were present on the blood agar. The other cultures were sterile. Smears made from the blood agar cultures revealed a pure culture of a small bacillus similar in every respect to that seen in the direct smears from the spinal fluid.

Diagnosis: Acute influenzal meningitis.

AMERICAN PSYCHIATRIC ASSOCIATION CORRECTED FINAL REPORT, JUNE 10, 1926

Karl A. Menninger, M.D., Topeka

The Committee on the Legal Aspects of Psychiatry made a preliminary report at the eighty-first annual meeting of the Association at Richmond, Virginia, on May 15, 1925. That report was printed in full in The American Journal of Psychiatry, Volume 5, No. 2, October, 1925, pages 306-311. Careful perusal of the report is recommended to the membership.

The committee asked for a continuation which was granted. It was decided to report in writing to the entire membership certain points of agreement and disagreement with regard to the various problems outlined in the questionnaire printed in the 1925 report. Members were then asked to indicate in writing their attitude toward the various points dealt with, mailing their comments to the committee. This enabled us to make indicated revisions in the final report, corresponding to the prevalent attitude and convictions of the majority of the members of the association. This final amended report is now respectfully submitted.

The committee felt that the problem assigned them was not merely one of what we as psy-

chiatrists should recommend to the lawmakers in regard to bills regulating expert testimony. It seemed to us that our problem was one of reinterpreting to society the function and the objectives of the psychiatrist, particularly insofar as these concern the type of behavior which is technically and popularly regarded as criminal. The committee felt that it was exceedingly important to divert the attention of the public from the relatively minor issue of alienistics to the major issue of psychiatrics.

In the practical application of psychiatry to problems of criminal law, the prevalent concepts of tradition and long usage conflict sharply with psychiatric attitudes. Popular theories of retribution and established methods of dealing with offenders almost entirely prevented a scientific envisagement of crime until recently when psychiatrists, in spite of their original limitation of field, discovered and demonstrated that types and trends of abnormal psychology extended far out from the asylum into the court room, school and home. The psychiatrists found their experience and technique equally applicable to the irrascible employe, the retarded school child, the persistent stealer, the compulsive drinker, the paranoid murderer, and the textbook cases of epilepsy, melancholia and schizophrenia. Face to face with the legal partitions of misbehavior into "insane" and "criminal" psychiatrists now find themselves with no technical interest in these partitions and no general agreement with them but with a driving concern in all the unpropitious trends of human character; with all acts, thoughts, emotions, instincts and adaptations, either socially or individually adverse. Some of these constitute committable "insanity", some of them do not; but all of them are psychiatric problems.

The question of responsibility is constantly being raised and the psychiatrist is frequently asked to make definite statements regarding the responsibility of a particular subject. As White and Glueck have shown, however, the conception of responsibility is exceedingly vague. In a strictly legal sense it probably means the capacity to change one's conduct in response to the direction of certain painful associations. Of course this is not the sense in which the public understands it or uses it. In the latter case it is merely an echo, the antiquated crystalization of primitive and infantile reactions known as talion law. Of course no scientist has a moment's consideration for such emotionally determined policies or mystical concepts of atonement. There was a time when even inanimate objects were held to this kind of accountability. If a man tripped over a chair and injured himself, the chair was "responsible", and must be punished by being burned or broken. Until comparatively recent times animals were held responsible for injuries they committed; they were tried and convicted and formally sentenced. But ultimately inanimate things and animals came to be exempted from the ritual of responsibility, and slowly but progressively children, idiots, and finally most of the "insane" were likewise exempted. Various curious tests then had to be decided upon to determine the "responsibility" of persons suspected of "insanity", (or an "irresponsible" "insanity"). Once they were compared in appearance and conduct with wild beasts, later with the "mentality" of a fourteen year old child. This was actually the criterion of "responsibility"! Current even today in many states is the slightly less hoary "right or wrong" test, persisting in spite of common knowledge that people are actuated by various compulsions to do things they themselves regard as wrong in the most shameful sense. Psychiatrists realize that the capacity to feel remorse does not imply power to control conduct.

The legal problem of responsibility evidently involves the philosophical problem of "free-will". Philosophy still debates the different issues of the question and science can hardly assume to give a final answer to them now. But the law stubbornly maintains that the question is closed. According to the law, all persons of certain categories possess absolute freedom of will, and all persons of other categories possess none. Neither science nor philosophy can accept such a conclusion.

The scientist then, really cannot answer as to legal "responsibility", and he does not wish to participate in the ritual of "punishment". (Several members of the committee emphasize our professional interest in observing how it gratifies the craving of the crowd for atonement through vicarious suffering.) For his patients the phychiatrist seeks, not retributive action, but diagnosis and scientific attempt at therapy. This, in a sense, is an "inhuman" attitude, in that it is a departure from the instinctive mechanism that rules most of humanity; the clamor for vengeance is more "human". But treatment may sometimes be as painful as the sacrifice prescribed by the legal ritual. Opening a boil or setting a fracture may be painful, and the psychiatrist, too, may prescribe painful treatment, but it is never punishment (retributive).

The committee felt, therefore, that the bill covering the question of criminal responsibility was

a problem upon which there was at the present time insufficient information and insufficient general agreement. Most of the members of the committee felt that the word "responsibility", as well as the word "insanity", and other similar static concepts should be eliminated entirely and endeavor made to determine rather the capabilities of the accused, or a specification of whether or not the mental status (disease, defect, trend, etc.) of the offender was likely to lead to neglect or danger to himself or to others.

For this reason the proposal of the American Institute for Criminal Law and Criminology was not wholly approved. It was regarded as a good beginning step but it has two flaws, one of which is that it perpetuates the ambiguous and metaphysical term "responsibility"; the other is that it insists upon a particular state of mind without being able to define it. The committee has given careful attention to Sheldon Glueck's excellent book on Mental Disease and the Criminal Law and recommends it to the study of all members as a presentation of the legal status of various problems involved, without particularly favoring the author's specific recommendations for legal reform.

With regard to the burning question of expert testimony, the committee was in almost unanimous agreement that the recent Massachusetts laws offered the best practical technique so far presented. The committee is favorably impressed by both the Massachusetts and California laws. Various defects will no doubt appear; it is perhaps questionable whether sufficient examination is provided for and whether there is sufficient latitude for recommendations. Psychiatrists certainly do not wish to be limited to "Yes" or "No" reports, i. e., to specify whether or not a man should be sentenced. It is rather a question of how he should be handled, where he should be kept, or what he should be given to do. The problem of sufficient remuneration is another question involved to which the committee had no time to give. That these laws have faults is certain, but they represent an enormous step in advance, and they anticipate nearly all of the defects and faults of the present system of expert psychiatric testimony in criminal trials. Whatever the precise legal procedure adopted, the committee felt it imperative that all judges be authorized (obliged) to request psychiatric advice, the examinations to be made conjointly, the reports to be made in writing, and the remuneration to be made from public funds.

The committee unanimously favored an attempt to codify the commitment laws of the various states. "Insanity" has come to mean nothing but certifiability, i. e., the desirability of enforced hospitalization. It seems quite unnecessary to have a score of different methods for determining the desirability of this step. The committee recognizes, however, the great practical difficulties in achieving this codification and has no specific ways and means to suggest.

The following suggestions were made by members of the committee in regard to possible projects for our Association in a furtherance of the aims of public education referred to above:

(1) That the American Psychiatric Association delegate a committee to publish a volume on the present status of our knowledge concerning criminality and outline a standard procedure. This committee should cooperate with the National Committee for Mental Hygiene and the American Bar Association.

(2) That there be correlated herewith the practices in foreign countries as England, France and Germany.

(3) That a survey be made of the present work of psychiatric clinics in association with courts and prisons and the results published, particularly with reference to the practical achievements of these clinics. The public knows little enough of psychiatric theories in regard to crime, but it knows even less about the medical work that is already being done in many places; hence such a study would not only afford a convenient and much needed reference for the use of social workers, legislators, judges, psychiatrists, etc., but would also serve as a basis for the dissemination of valuable educative information to an uninformed but eager public.

(4) That the American Psychiatric Association cooperate with the National Research Council, which is already considering research problems along this line and that a representative of the American Psychiatric Association be selected to function on the National Research Council.

(5) That this association should encourage uniformity of clinical statistics in prisons through contact with the American Prison Association.

(6) That there be an obligatory published review of the cases in which members of this association testify.

(7) That an annual report of cases, clinics, and of the situation in general, be presented to the American Psychiatric Association.

(8) That The Journal of the American Medical Association be assisted by the American Psychiatric Association in presenting to its readers a comprehensive and progressive account of psychiatry and criminology with the aim of edu-

cating the medical profession itself in psychiatric and criminologic problems.

These suggestions merit further discussion.

For the present, your committee specifically recommends the following proposals for immediate action:

(1) That the American Psychiatric Association go on record as favoring certain types of legislation such as the recent Massachusetts enactment which put the psychiatrist in a position of counselling the legal authorities as to the disposal of social offenders.

(2) That the American Psychiatric Association set up, agree upon, and publish official standard qualifications of medico-legal experts, and that it maintain a published list of such qualified experts, revised annually, for the convenience of court selection.

(3) That the American Psychiatric Association, in its annual conventions, give more attention to the problem of psychiatry as applied to crime and other behavior disorders including demonstrations of the work being done in penal and correctional institutions, behavior and child guidance clinics, and psychiatric clinics associated with criminal courts.

(4) That the American Psychiatric Association foster an attack on certain pressing problems of research in this field, particularly (a) the working out of a useful nosological classification of mental orders which will take into consideration behavior pathology not now definitely defined or classified from a psychiatric standpoint, and (b) the analysis of the medico-legal situation in the various states of this country with particular reference to psychiatry.

(5) That the American Psychiatric Association advocate the association of a psychiatrist or a psychiatric clinic with every penal institution and with every criminal court, to act in an advisory and consulting capacity without administrative duties, and that it advocate the teaching of courses in Criminology in both law schools and medical schools by psychiatrists.

(6) That the American Psychiatric Association maintain a central bureau, either in the form of a standing committee or in the form of a full-time paid secretary, to aid in disseminating to the medical and lay public, in a dignified and accurate manner, news of the actual and potential contributions of psychiatry to present-day social life, perhaps cooperating with the National Committee for Mental Hygiene. Such a bureau should publish from time to time an official bulletin containing official statements of psychiatric attitude and opinion available to newspapers, magazines and the public at large.

(7) That the American Psychiatric Association officially accept, endorse and subscribe to the following statement of the present attitude of the members of this association toward the problems now under consideration and give it wide circularization.

OFFICIAL STATEMENT OF POSITION

We believe—

(1) That the psychiatrist's chief concern is with the understanding and evaluating of the social and individual factors entering into failures in human life adaptations.

(2) That crime is a designation for one group of such adaptation failures, and hence falls definitely within the focus of psychiatry, not excluding, of course, certain other branches of science.

(3) That crime as well as other behavior and characterologic aberrancies can be scientifically studied, interpreted and controlled.

(4) That this study includes a consideration of the hereditary, physical, chemical, biological, social and psychological factors entering into the personality concerned throughout his life as well as (merely) in the specific "criminal" situation.

(5) That from a study of such data we are enabled in many cases to direct an attack upon one or more of the factors found to be active in a specific case to effect an alteration of the behavior in a propitious direction; while in other cases where this is not possible we are able in the light of past experience and discovered laws to forsee the probabilities to a degree sufficient to make possible proper provision against subsequent (further) injuries to society. By the same experience and laws we are enabled in still other cases to detect and endeavor to prevent the development of potential criminality.

(6) That these studies can be made with proficiency only by those properly qualified, i. e., scientists who have made it their life interest and study to understand and treat behavior disorders.

(7) That this point of view requires certain radical changes in legal procedure and legislative enactment, insuring the following provisions:

(a) The court appointment, from a qualified list, of the psychiatrists testifying in regard to the mental status, mechanisms, or capabilities of a prisoner; with opportunity for thorough psychiatric examination using such aids as psychiatrists customarily use in practice, clinics, hospitals, etc.; with obligatory written reports, and remuneration from public funds.

(b) The elimination of the use of the hypothetical question and the terms "insane" and "insanity", "lunacy", etc.

(c) The exemption of the psychiatrist from the necessity of pronouncing upon intangible concepts of religious and legal tradition in which he has no interest, concern or experience, such as "responsibility", "punishment" and "justice".

(d) The development of machinery adequate to the requirements of the psychiatric point of view in criminal trials and hearings, including court clinics and psychiatrists, and ultimately a routine compulsory psychiatric examination of all offenders with latitude and authority in the recommendations made to the court as to the disposition and treatment of the prisoner.

(8) That this also entails certain radical changes in penal practice, including:

(a) The substitution of the idea of treatment, painful or otherwise, for the idea of retributive punishment.

(b) The release of prisoners upon parole or discharge only after complete and competent psychiatric examination with findings favorable for successful rehabilitation, to which end the desirability of resident psychiatrists in all penal institutions is obvious.

(c) The permanent legal detention of the incurably inadequate, incompetent, and antisocial, irrespective of the particular offense committed.

(d) The development of the assets of this permanently custodial group to the point of maximum usefulness within the prison milieu, industrializing those amenable to supervised employment, and applying their legitimate earnings to the reimbursement of the state for their care and maintenance, to the support of their dependent relatives, and to the reimbursement of the parties injured by their criminal activities.

(9) That effective preventive medicine is applicable in the field of psychiatry in the form of mental health conferences and examinations, child guidance clinics, mental hygiene clinics, lectures and literature, and similar institutions and efforts.

(10) That the protection outlined provide an efficient and scientific solution to the problems of crime, viz.:

(a) The protection of society.

(b) The rehabilitation of the "criminal" if possible.

(c) His safe and useful disposition or detention if rehabilitation is impossible.

(d) The detection and the prevention or deflection of the development of criminality in those potentially predisposed.

Respectfully submitted—Adler, Briggs, Glueck, Healy, Jelliffe, Kieb, Lowrey, Menninger, Salmon, Williams, and White.

ABSTRACT—"TECHNIC OF USE OF REMOVABLE RADON SEEDS IN CARCINOMA OF THE TONGUE"*

Joseph Muir, M.D.

This article describes a new technique of radium therapy in lingual carcinoma which offers a practical means of irradiating even the most inaccessible tongue lesions. This is accomplished by the implantation of removable platinum radon seeds. As the methods of treatment heretofore used have always proved unsatisfactory, this article is of especial importance from a clinical standpoint.

The various methods by which lingual carcinoma has previously been treated are discussed and their advantages and drawbacks considered. Imbedding of bare tubes according to Janeway's method affords an even distribution of radiation, but causes necrosis which is invariably followed by sloughing and may even induce unavoidable fatal hemorrhage. If screened seeds are used, necrosis is avoided, but they are objectionable because they must remain in the tongue as foreign bodies. The platinum needles advocated by Regaud also obviate necrosis and can be removed when radiation has been accomplished, but proper distribution of these applicators is very difficult; they cause too much trauma; and above all, they are hard to immobilize and cannot be placed upon the posterior dorsal surface of the tongue.

The method offered in this article obviates all these difficulties, while restraining every desirable feature. The seeds are completely screened with platinum, thus doing away with necrosis and sloughing; they are easily withdrawn after adequate dosage has been delivered, so that they do not remain in the tissue as foreign bodies. These seeds can be placed in any position required, just as readily in the hitherto inaccessible "root" of the tongue, as in more favorable positions. The article is profusely illustrated, demonstrating the exact method of approach to these inaccessible lesions.

The growth is first carefully palpated, and the number of seeds required determined according to its depth and surface extent. When a seed has been placed in the desired position, the attached thread is left protruding from the point

*"Annals of Surgery", Philadelphia, May, 1926, vol. lxxxiii, page 598.

of entry, where it is cut off so as to leave just enough to be readily grasped with forceps at the time of removal.

The entire treatment causes no pain, and but slight inconvenience to the patient; and when skillfully performed under proper aseptic precautions, the technique offers an excellent means of solving one of the most vexing of clinical problems.

HEALTH EXAMINATIONS

T. J. EDMONDS, Des Moines

"Get a Health Examination Before Your Next Birthday" is the slogan on several thousand little cards 2 x 3 inches which the Iowa Tuberculosis Association has distributed within the past month.

This is merely a symptom of the sort of work done by this organization in every county in the state. It seeks to bring public sentiment in line with scientific medicine and to promote the closest cooperation between the patient and his family physician and dentist.

Such an organization consisting of both laymen and physicians although the majority of its executive committee are physicians can utilize methods which physicians consider outside the range of their proper activities. It can engage in preventive work on a large scale; it can use the facts furnished by scientific medicine and convert them into educational material for the general public through the medium of the newspapers and public meetings and the schools.

Because of this close relationship between the medical profession and organized public health work physicians all over the state are taking an interest in the coming Christmas seal campaign. They are offering their services to Christmas seal chairmen as speakers and in other ways.

In many counties of the state physicians have been identified with the public health movement very prominently. In several counties the president or vice-president of the county health association is a doctor. In other counties the county medical society has availed itself of the services of the local health association and of the Iowa Tuberculosis Association in the way of speakers, consultants for clinical conferences, etc.

RESULTS OF HEALTH WORK

Every year the average of human life is increased by two months, according to figures collected by the Iowa Tuberculosis Association. In the past ten years two years have been added to the expectancy of life of the people of the United States. The most startling advance has been made in regard to tuberculosis. Since the formation of the National Tuberculosis Association in 1905 the death rate from that disease has been lowered from 201 per 100,000 to 99, a net decrease of 51 per cent.

In a published bulletin recently issued one of the large life insurance companies frankly states that this lengthening of human life can be attributed largely to the public health work which has been done within the last few years, especially along four lines: education of the community for disease prevention, regular medical examinations, teaching of health habits to children, and public health nursing.

WHAT THE I. T. A. IS

The Iowa Tuberculosis Association is the only state-wide voluntary health agency in Iowa. In most of the counties of the state there are organizations doing health work which are affiliated with the state association. The association is governed by a board of directors which is democratic in its make-up, being composed of representative directors for the counties which are doing organized health work and twenty-five members at large elected by the membership at the annual meeting. In order to gain the right to elect a representative member there must be a county health association or committee which represents various parts of the county and the various local groups having a natural interest in public health. Among these groups are the Farm Bureau, the schools, women's clubs, commercial bodies, county medical societies. Further, the county association undertakes to plan a local health program and to make active use of its funds, to make reports twice a year, to keep a record of its expenditures, and to sell Christmas seals in order to furnish a fund for future health work.

A BROAD HEALTH PROGRAM

Since the program for the cure of tuberculosis consists mainly of those simple remedies of nature which are to a large extent the cure of most ills—namely, fresh air, sunshine, wholesome food, rest, freedom from anxiety, and since the method of preventing tuberculosis is that which will build up resistance against any disease, the tuberculosis movement has become the general public health movement. At a recent directors meeting of the Iowa Tuberculosis Association one of the directors suggested changing the name to "Iowa Public Health Association", but a compromise was effected for the

present by inserting on the letter heads "An Organization for the Promotion of Public Health—Supported by the Sale of Christmas Seals".

What the Association Does

The association considers its most valuable work its health publicity. It distributes a large quantity of literature. It furnishes material for exhibits at fairs and elsewhere. It makes suggestions to local societies as to ways of making health knowledge the property of the community. The hearty cooperation of the newspapers of the state helps inform readers of the importance of periodic medical examination and the means of conserving individual and community health.

It introduces into the schools the Modern Health Crusade, which has been found a most effective teaching device bringing about the permanent formation of health habits by the children and thus building against future disease. Iowa schools have for the past seven years made the prize record for health work throughout the nation.

But its health-educational work in the schools is not confined to the Crusade. Poster contests, essays, pageants, and various forms of project work are included in the health program.

The Iowa Tuberculosis Association edits "The Campaign", a monthly "Magazine of Public Health". The board of control of state institutions prints it at Anamosa. It is distributed as second class matter to physicians, nurses, teachers and lay people interested in public health, a mailing list of 11,500. It has proven another valuable medium of informing the public on the subject of health. The periodical is not technical in any sense, but contains news and practical suggestions. Its columns are open to other state departments and to private state organizations.

The State Association represents local sentiment in the matter of health legislation, cooperation with public officers and with private state-wide agencies. In one session it was instrumental in securing the passage of nineteen out of twenty health bills before the legislature. It is interested in bovine tuberculosis, milk ordinances, housing, child welfare and a vast range of subjects which bear on health and which bring it into friendly contact with officials and private organizations.

One of the most striking activities of the Iowa Tuberculosis Association is the county clinic. These clinics are held on the invitation of county medical societies with the cooperation of the local health association. Specialists in tuberculosis and heart diseases and frequently specialists in children's diseases and eye, ear, nose and throat are furnished for the examinations and a staff field nurse assists in the preparatory work and in the conduct of the clinic.

The State Association has on its staff an instructor in occupational therapy who serves the state sanatorium and two county sanatoria. This occupies both the hands and the minds of the patients and makes life easier and recovery more probable.

The association renders numerous services to individual localities and is a connecting link between the National Association and local communities. As an example of the latter, the Polk County Hospital Board availed itself with great satisfaction to everybody concerned of the services of Mr. T. B. Kidner, the sanatorium construction expert of the National Tuberculosis Association.

Local Work

Let us now inquire what are some of the practical things which are done locally with the proceeds of the Christmas seal sale. In the majority of the counties of Iowa there are public health nurses and Christmas seal funds are used either to help pay the salary of these nurses or their transportation or to furnish necessary supplies for their work, such as gauze, tongue depressors, portable scales, etc. Some of these nurses make school inspections and others operate as general visiting nurses for the community. In one county where the children were examined for defects the following corrections were made: 113 children had glasses fitted, 414 had their teeth fixed, 307 had minor operations such as removal of adenoids and 13 were sent to hospitals. All of this work cost the county association about three hundred dollars but its value to the children has been estimated as worth ten thousand dollars based on what would have been the minimum cost of these operations and its value in the increased efficiency of the child in school and at home and in the saving of health in the future cannot be reckoned under six or seven figures.

In several of the larger places nutrition classes have been conducted in the schools. Both parents and teachers have been taught what the child ought to eat and the reports show that nine-tenths of the children in these classes were brought from under-weight to normal weight and made a gain of from 5 to 15 per cent in two months' time.

The modern health crusade has been introduced in the schools of some seventy-five counties. School principles report that the children

who form health habits through this system show improvement in their other school work and that there is less absence on account of illness.

In more than sixty counties measuring scales have been purchased for various schools. In other places milk lunches have been introduced and a few committees have supplied the rural schools with oil stoves for the purpose of preparing luncheons at recess.

Weighing and measuring, medical and dental inspection and nursing service have been introduced into many schools. In several counties child welfare clinics and county tuberculosis and heart clinics have been held. Health education has been stimulated through health posters and health essay contests. In a few of the larger cities open air schools and summer fresh air camps have been conducted. In quite a number of towns permanent clinics have been established where the general public can receive physical examinations free or for a nominal sum. Practically every county has conducted an educational campaign through the distribution of literature and newspaper publicity.

Perhaps the most valuable work of the state association has been the promotion of these local activities. One of its publications entitled "Local Programs" suggests two hundred fifty items of local health work which may be done with moderate sums of money. The state association has stimulated local organizations and has been in constant touch in an advisory capacity with public health nurses, school teachers, county associations and health workers. The state association distributes a great deal of literature free and other literature at cost and keeps a stock of the health publications of the United States government, state educational institutions and other agencies.

The Iowa Tuberculosis Association and its county units are supported by the annual Christmas seal sale.

"HABIT COUGH"

"Habit Cough" is a subject commented on by the Indianapolis Medical Journal. It is contended that more than 50 per cent of non-productive coughs are unnecessary and should be overcome without drugs. It is frequently observed that patients cough unconsciously in imitation of others, and when it is found that the cough is a "nervous" cough, we should employ psychic measures instead of administering narcotic drugs.

SYPHILIS IN PREGNANCY AND ITS TREATMENT

ROBERT E. JAMESON, M.D., Davenport

Syphilis is a contagious and infectious disease similar to tuberculosis in its chronicity. Eighty per cent are infected by sexual intercourse, 20 per cent are infected innocently (a wife infected by her husband through sexual intercourse, a child born of a syphilitic mother—inherited syphilis — kissing — or by some eating utensil, toilet articles and various other means of disease being carried to and infecting children and adults).

The following facts regarding syphilis taken from the "Venereal Disease Information" issued by the United States Public Health Service issue of December, 1925.

Syphilis was probably not definitely appreciated until the year 1500. In 1516 nurses were found carrying infection by their milk (wet nurses) to the infants they were feeding. In 1551 Mussa Brassasole recognized the mode of transmission from a syphilitic child to a nurse and from her to a new nursling and its family. In 1564 Augier Ferrier recognized that venereal disease is contracted by the infant in the womb of the mother and is a hereditary disease.

Treatment during pregnancy seems to have been first used in 1569. Garnier proposed to house these women and expressed his opinion that far from harming pregnant women that the treatment would cure them and their children. There were 100 per cent deaths of congenital syphilis, in those who were infected and not treated, deaths were not feared. However, it is a fact that only within the last thirty years have proofs of the efficiency of treatment been so well established that it is now accepted as quite incumbent upon physicians who attend expectant mothers.

Our attention today is being given the early detection of syphilis in the prospective mother and to give her prompt and adequate treatment. The results unquestionably will be to reduce materially both fetal and maternal deaths. The present day conviction of most syphilographers is that the syphilitic pregnant woman must be treated thoroughly and that it would be feasible to examine every pregnant woman for the clinical earmarks of obscure syphilis, such as scars, periosteal involvement, pigmentations, headaches, pupilary and other ocular defects, lymphadenal enlargement and neuropsychiatric evidences. The finding of any such earmarks would war-

rant serological examination in any patient. One or more previous abortions unaccounted for as to their cause or the previous birth of syphilitic children as well as serological and physical examination of husband and father. Fournier in his book dealing with prevention and treatment of congenital syphilis names four mistakes which should not be made:

1. Syphilitic children should not be forgotten.
2. One should not neglect to watch and safeguard all children from the moment they spring into existence.
3. One should not neglect to treat them as syphilitics even though stigmata are not present.
4. They should receive the same treatment and as long as those suffering from acquired syphilis."

Dujol and Laurent state that ante-natal treatment changes fetal mortality from syphilis from 75 per cent to 12 per cent. In Saint Etieune, France, the women who had formerly had many miscarriages and still-births, as a group, produced more living children in one year after treatment was instituted than in all the rest of their lives.

Pregnant women tolerate anti-syphilitic treatment excellently, and adding to this the results produced, it is both necessary and desirable to perfect and extend antenatal treatment, Marfan states that it seems as though congenital syphilis had diminished during the past few years. He does not consider it due to diminution of the frequency of acquired syphilis but probably to the fact that a large number of syphilitics are disinfected early in the disease. Ante-natal treatment according to Pautrier has recently produced 90 per cent living children from mothers infected with syphilis.

Practitioners here and there in all countries have been treating pregnant women with the aim of producing healthy children. A few years ago many physicians hesitated to advise or administer anti-syphilitic treatment to pregnant women fearing miscarriage or failure. Today syphilographers advise and administer anti-syphilitic treatment to pregnant women infected with syphilis for the purpose of checking the disease and for its cure. Syphilologists and physicians skilled in administering anti-syphilitic treatment which is provided for pregnant women, not alone in our own country, but in France, Denmark, England, Germany and Russia.

The mortality of children born of syphilitic mothers was 74 per cent before treatment was begun and had been reduced to 8 per cent in 1924. Dujol and Laurent are of the opinion that it might be reduced to zero.

Personally I do not believe that women are infected as frequently as men, however, syphilitic infection in females is of equal or more importance in a married woman or women who expect to be married and raise children.

Each woman who has been or is infected with syphilis should be informed by her physician of the seriousness of her infection. There is no truth in the statement so often made by patients, "My disease is not serious, as I have just a slight touch or light dose of the disease". Every patient with a syphilitic infection should be impressed with the seriousness of the disease.

What may seem to be very mild symptoms in the first stage may in the second or third stages prove to be very serious and the symptoms severe.

A woman may have syphilis with mild or no symptoms. The woman may have been infected one, five, ten, twenty or more years previously with no symptoms. Then symptoms may develop indicating involvement of some internal or vital organ of the body or the nervous system which anti-luetic treatment alone will check or cure. Every sore which may be suspected as a possible chancre which may be a genital or an extra genital, if the nature and cause is not known, should have a specimen collected for a dark field examination from a suspected chancre or involved lymph glands which will decide the presence or absence of the spirocheta pallidum. If positive, anti-syphilitic treatment should be administered over a period of time of at least five months. Some authorities believe that the nervous system is invaded and affected during the first stage or the second stage of the disease. By making an early diagnosis and administering treatment early in the first stage the disease is more readily and surely eradicated and the possibilities are that one course of anti-syphilitic treatment consisting of six or eight weekly intravenous injections of one of the arsenicals and twelve weekly intramuscular or intravenous injections of mercury or ninety mercurial inunctions followed with six or eight weekly intravenous injections of one of the arsenicals. Some authorities advise a second course of anti-syphilitic treatment during the first year regardless of a negative Wassermann following the first course of treatment. My reasons for first administering one of the arsenicals is to immunize the patient in the shortest possible time so that it will not be probable for them to infect others in their daily social or business intercourse, and to cause these lesions or chancre to heal more quickly. Mercury being administered for its well known

beneficial and curative affect and then six or eight weekly injections (intravenous) of one of the arsenicals. This treatment covers a period of about six continuous months and is commonly called a course of treatment.

During the second stage of the disease, with a rash more or less generalized over the body which does not itch (in white people) (itches in negroes?), hair thinning, mucous patches in the mouth, with a history of a sore (chancre) some three months (two to six months) previously should suggest syphilis and warrant having a Wassermann blood test made which should be positive in about 100 per cent of the cases. Treatment for this case would be similar to the course of treatment suggested in the first stage, the lesions seen in the rash, mucous patches are all swarming with the germs of syphilis and the patient should be informed of the possibility of infecting people by kissing, etc., treatment indicated is to make the patient immune and safe to mingle with others in his daily social and business relations, some advise giving arsenicals first for the purpose of healing the mucous patches. Mercury too is advocated by many in this stage, also one of the iodides, this followed by one of the arsenicals, total amount of treatment about the same as given in the first stage and over a similar length of time. In the second stage, leading authorities now believe is the period when the nervous system is invaded, in those so affected, hence the importance of early diagnosis, continuous and sufficient anti-syphilitic treatment, and blood and spinal fluid Wassermann tests following. My personal advice to patients is to have a blood test one month following treatment of the first or second stage of the disease and if negative a blood Wassermann made every six months for the following three years; if negative during this time, then to have a spinal fluid Wassermann, ophthalmologist to examine the eyes, and the reflexes examined, together with a physical examination and history. If all are negative the patient to be advised of the negative findings but to keep in mind the fact that syphilis like tuberculosis may go over a period of years, and if a lowered resistance from any cause the infection may again be in evidence and further treatment required, and if any of the tests named above should be positive it may suggest the necessity of further treatment. The same number of tests over the same period of time is advisable following treatment in the third stage. A provocative test is often indicated in those who have the disease in the tertiary stage.

A woman who has a positive diagnosis of syphilis, which is in the third, or tertiary stage, (symptoms of the disease two years or more following the second stage) treatment may be modified. I find that many of these patients are physically below par, underweight, (some addicted to alcohol) (I have never seen a man or a woman who drank ever cured of syphilis) and required building up before intensive treatment could be safely administered. I find, especially in those over fifty, who are physically below par, underweight, etc., that if one of the iodides is first given for a month together with instructions regarding diet, which is principally to avoid all sour foods, acids in any form, tomatoes, sour fruits, alcohol, etc., then to continue iodides and also administer mercury or bismuth for at least three months. Personally I prefer bismuth intramuscular and give from twelve to twenty weekly intramuscular injections into the buttocks, then stop mercury or bismuth and iodides and administer eight to twelve weekly intravenous injections of neoarsphenamine beginning with 0.15 or 0.3 and gradually going up to 0.6 or 0.9, following this the Wassermann on the blood and spinal fluid, eye examination, reflexes and provocative blood Wassermann made as indicated. One usually expects to administer from one to three or four courses of treatment in those suffering from tertiary syphilis. It may be possible that some patients may never have a negative Wassermann. However, if the patient gains in weight during or following treatment, eats well, sleeps well and feels well he will enjoy life just the same as many a person who suffers one of the several other chronic diseases, but who enjoys life only with proper living and treatment as indicated when the disease can be kept under control, if not cured. Syphilis is, however, now classed as one of the curable diseases. Not every case is cured, however, this being true of all other diseases.

Every person infected with syphilis has just one course to follow that will check the progress of the disease or cure it, and that is to have it thoroughly impressed on every patient's mind, that syphilis is a chronic, infectious, contagious disease, slow in its course, but amenable to anti-syphilitic treatment.

Every woman who is aware of her infection should have one or more courses of anti-syphilitic treatment, examination following such course or courses of the treatment to determine if she is cured. Examinations should show she is free from the disease or she should not become pregnant. A woman who is pregnant who is aware that she has syphilis, should at the earliest possible moment have anti-syphilitic treatment adminis-

tered. It is advisable to have constant and continuous treatment at least during the last six months of the pregnancy. While every infant born may not have syphilis the percentage is so high and the chances for miscarriages so great unless anti-syphilitic treatment is administered. From past experiences the possibilities of having a full term, healthy baby are most favorable when thorough anti-syphilitic treatment is administered.

Summary

1. Syphilis is a contagious and infectious disease.

2. In 20 per cent of all those infected are innocently infected (this does not include the innocent babies born with syphilis, they too are innocent victims of infection).

3. Today syphilis does not carry the stigma it did thirty or more years ago due to a better understanding of its contagious and infectious nature, which is similar to other contagious and infectious diseases.

4. Early diagnosis and thorough treatment is urged.

5. Continuous, intensive and thorough treatment should be administered especially in the first and second stages, if possible, to avoid invasion of the nervous system.

6. Care in treating older patients who are physically below par, less intensive treatment is indicated and to extend the period of treatment over a longer time.

7. All women who are married and expect to have children should have thorough treatment and be free from the infection before bringing children into the world.

8. Every woman who is pregnant, who has syphilis, should have anti-syphilitic treatment at least during the last six months of her pregnancy.

9. Anti-syphilitic treatment is indicated for its beneficial effect on the health of the pregnant woman, for the purpose of checking the progress of the disease if not curing it, and preventing abortion or miscarriage.

10. Anti-syphilitic treatment of the pregnant woman is urged for preventing infection of the infant and permitting the baby to be born healthy and at full term.

11. To have necessary Wassermann tests on blood and spinal fluid, examinations of the eyes, reflexes and physical condition, following anti-syphilitic treatment.

12. Syphilis is a curable disease with anti-syphilitic treatment.

CHRISTMAS SEAL SALE

Dear Doctor:

I am writing you as a member of the Iowa Heart Association to enlist your interest in the Christmas seal sale. Christmas seal funds next year can be used in the campaign against heart disease.

The Christmas seal sale is conducted by county and local organizations affiliated with the Iowa Tuberculosis Association.

A good seal sale in your county or city will assist in carrying on the combination heart and lung clinics which are held under the auspices of county medical societies.

It will finance the publication of literature on heart disease.

There are many other ways in which Christmas seal funds can be used in advancing the movement represented by our heart association which you know has no funds of its own.

If you do not know the name of your local Christmas seal chairman write to our secretary. I would be glad if you would get in touch with such chairmen and offer your cooperation either as a speaker or in any other way you feel you can aid best. A word about the seal sale now and then to your friends will be an effective way of helping.

Merrill M. Myers,
President, Iowa Heart Ass'n.

P. S.—Are you receiving each month the little health magazine edited by the Iowa Tuberculosis Association and known as "The Campaign"? If not, write our secretary. It frequently contains short articles on heart disease.

TYPHOID FEVER IN INFANTS

While typhoid fever in children is not uncommon, with the increased municipal health precautions, it is becoming more so. The fact that children under one year of age are seldom attacked may be due to their smaller chance of exposure; in the author's series only 5 in 100 cases were infants under one year of age.

Some authors found hemorrhage present in about 3.9 per cent of their cases in children, which figure is equal to the incidence in adults. The present authors and others had no hemorrhages in their series. It is true that below the age of ten years hemorrhage becomes rare.

Liability to perforation from typhoid ulceration in infancy is rare, but it increases in proportion to the increase in age. This complication is rare under five years of age and is about 50 per cent more common in adults than in children.

Relapses occur in a large percentage of children with typhoid, especially in young infants.—Abstracted from Archives of Pediatrics by the International Medical Digest.

The Journal of the Iowa State Medical Society

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CONFERENCE OF COUNTY SECRETARIES

It had occurred to us that inasmuch as the success of medical organization depends largely on the activities of county society secretaries, an annual conference could be materially helpful in bringing about a better understanding as to what county secretaries could do in developing a greater interest in organization. As it now stands the body of the medical profession gathers once a year to consider questions of general professional interest and the reading and discussion of formal papers; all good so far as it goes, but it is not enough. The secretary of the State Medical Society has accomplished much in creating a greater interest in the work of the House of Delegates. But beyond the House of Delegates is the county medical society and the highly responsible secretary, who does or should keep the county society informed as to the activities of the state and national associations. If the secretary fails, the society fails. One of the facts we deplore is the weakness of our state organization which runs through the entire local and state bodies. It appears to be a fact that county societies fail to consider adequately who the secretary of the society should be. No attention is given to his fitness. We do not doubt the ability of every member of the local society that he is capable of filling the office of secretary, but is he willing to give the time to function as the leader of the local profession?

We do not doubt that at least one member in each society is willing to make the sacrifice and when found should be continued in office and when once installed the work will go on easily.

If we could have an annual conference there should be added the district councilor for obvious reasons.

The state of Michigan has adopted the conference plan and from reading the transactions it would appear that the plan was meeting with success.

Dr. Channing Smith, councilor of the seventh district, suggested this idea and has promised a statement for publication. Dr. Smith has had large experience in organization and will be able to outline a plan which will lead to greater usefulness in our work.

HEALTH EXAMINATION OF SUPPOSEDLY HEALTHY PEOPLE

One of the subjects permanently before the medical profession is discussed under the head of periodic health examinations. There is a feeling in medical circles that if the general public would submit to periodic health examinations, many forms of disease would be recognized in their incipiency; diseases which do not attract the attention of the individual until a degree of disability arises that leads him to consult a physician and then it is found that some obscure disease has passed into the danger phase.

Many of the old line insurance companies have offered these examinations to their insured risks. They do this under the belief that many diseases in their earliest stages could be cured by proper treatment and that the life of the insured would be extended many years. This is entirely a business proposition with the insurance companies which desire to put off the fatal day as long as possible. The insurance companies have at their command very extensive statistics, gathered through long years of study of the causes which lead to an early death. If the insurance companies find it profitable to offer free examination to their insured, it is also profitable to the individual risk himself, in that it gives him an opportunity of ascertaining that he may have some insidiously developing disease which may materially shorten life and if he finds himself free from any such disease it adds materially to his comfort in knowing the fact. The plan generally advocated is, that the individual himself should go to his family physician at stated periods for a health examination for the reasons we have already stated. It is unfortunately a fact that this idea of peri-

odic examinations is being commercialized, and in certain important centers of population, commercial companies are being organized for the purpose of making these examinations for a certain fee. As an illustration we present some statements made by the Locomotive Engineers' Journal, published in Cleveland. We are advised that "the readers of the Journal are invited to send to 1136 Engineers' building any questions pertaining to their health which will be carefully considered and answered by our consulting physician. If such questions are of general interest they will be answered publicly in this department, or if of private nature, reply will be by mail to the inquirer. Signed, H. P. Daugherty, second vice-president."

In this department we find a form which reads as follows: "I hereby subscribe to your regular quarterly, chemical and microscopical urinalysis service. Special price to members of the Brotherhood of Locomotive Engineers for single membership $5, husband and wife $10 per year; children under eighteen years of age $2.50 per year." Then comes the form of check.

We find the following additional information: "Our health department has a medical director who goes over every report before it is mailed to you. When your examination is found normal, it will be so stated. If a slight abnormal condition is found you will receive special mention in the report calling your attention to this so that correction can be made in time before serious trouble arises. When a serious abnormal condition is found our medical director will write specially with the report and will cooperate with you and your physician so that you receive the greatest possible attention in overcoming your difficulties."

It goes without saying that a patient in Iowa examined by a physician in Cleveland through letter and a specimen of urine hardly receives a complete examination. The only requirement on the part of the patient is to send a letter describing his condition with a bottle of urine for chemical examination. Apparently the important requirement is the remittance of $5 or $10 with $2.50 extra for children. This examination may be well enough so far as it goes but it can never give a full and satisfactory result. The person who seeks periodic health examinations should go to his family physician who knows his history, his personal peculiarities, his environment, and the dangers to which he is exposed, followed by a close and careful physical examination of all the organs of the body.

It may be seen at once that this is purely a commercial enterprise and leads the conservative locomotive engineer into the mistaken idea that he is well or not well according to the findings of a commercial institution. This is only one of numerous commercial clinics that are run entirely in the interest of commercialism. It seems as if the medical profession should take warning from these illustrations of commercial enterprise to prepare themselves for a thorough and competent examination and to lend their influence to the breaking up of these commercial undertakings which tend to undermine the dignity and character of the medical profession, and to take from them the rewards that are due them. If the life insurance companies generally adopt the plan of accepting risks without a medical examination they may well stop to enquire if they are performing their full duty as life insurance companies.

IS UNIVERSAL LIFE INSURANCE COMING?

Dr. William E. Musgrave of San Francisco, in the Journal of the American Medical Association calls attention to some facts in relation to life and health insurance worth considering by the medical profession.

Some fifty-five million individuals, or approximately one-half the people of the United States, are protected by life insurance recorded in 100 million policies of an average value of $1,333, carried (90 per cent plus) by about 170 companies: there are more than three times as many insurance policies in force as there are automobiles in use. Approximately seventy-five billion dollars of life insurance is in force, and it is being increased at the rate of some fifteen billion dollars a year. The annual income of this incomprehensible business closely approximates that of the national government, being three billion and some odd million dollars for each. However, in disbursements, the government wins, by spending more than three billion, or nearly all its income, while the life insurance companies expended last year (to policyholders) about half their income.

Not only is this healthy giant of life insurance growing like the proverbial beanstalk, but it is spreading its branches like the green bay tree. It is becoming what the name life and health insurance implies, and less than the death insurance of earlier days. It is branching out into the field of health and medical service to such an extent that if it is wisely guided it is likely, at no far distant date, to do medically for our citizens, by

private and mutually beneficial enterprise—and do well—what Germany, England and certain other countries are unsuccessfully trying to do by government in monopolizing and socializing the practice of medicine. Our government has largely undertaken similar control of education, but so far has only fastened its tentacles into certain phases of health.

There is one phase of the commendable growth of life and health insurance, as private business, that concerns all people and ought to be better understood than it is. It consists essentially in a weakening of the health requirements for policy purchasers and extension of the medical care of policyholders, apparently under the philosophy that the lowered health standards for purchasers will materially increase the volume of business, and that this, together with more extensive medical supervision of defective policyholders' health, will take care of the extra hazards inherent in this new development of business. It may be that this is a fact. In any event, we may rest assured that the financiers who determine the policies of insurance carriers are not wholly altruistic in their actions and that they are doing as little guessing as possible in taking this definite step. To be sure, not all companies admit that the doing away with medical examinations of applicants for insurance will result in increasing life hazards among their assured, and none of them call particular attention to it as a probability.

LIVER EXTRACTS IN HYPERTENSION

An editorial appears in the March 4th number of the Boston Medical and Surgical Journal, on the value of Liver Extracts in Hypertension. Dr. MacDonald of Boston has elaborated an extract of the liver which appears to reduce markedly the normal blood-pressure of animals and to exert in certain instances a beneficial affect in hypertension of man. It appears also that Dr. Major of Kansas City has elaborated a similar extract.

One would infer from this that hypertension was a disease instead of being esentially a symptom. We can readily imagine that a medicine or an extract that has for its purpose the reduction of blood-pressure must be a dangerous agent. We know as a matter of fact that high blood-pressure is in many cases a conservative measure which increases the individual safety and that to rapidly decrease hypertension might not be without its dangers. High blood-pressure has become quite a favorite, so-called disease, of recent years. It is not unusual to find a considerable variation in the blood-pressure in normal individuals. It seems unnecessary to state that the question of blood-pressure should always bear a relation to a careful medical investigation of the patient.

CHLORINE GAS THERAPY

We have received many announcements of the value of chlorine gas in the treatment of colds, evidently intended for publication in our Journal, at least in part.

The Boston Medical and Surgical Journal expresses wonder whether this may not be a fad like many which have been popular for a time and then discarded. The Boston Journal gives the names of a long list of those who have signed indorsements to the chlorine gas treatment. The Journal observes that a cold may lead to a pneumonia or some other serious disease but no one can logically affirm that a given remedy can, at the present time, prevent the development of a pneumonia any more than we used to say that we "broke up" a typhoid fever or something of that kind.

DETENTION IN HOSPITAL FOR UNPAID BILL

(Gadsden General Hospital vs. Hamilton [Ala.], 103 So. R. 553)

The supreme court of Alabama says that plaintiff Hamilton had been in the defendant's hospital for about three weeks, during which time she had undergone an operation for exophthalmic goiter. At the end of that period she desired to go home, but was told that she could not leave the hospital until her bill was paid. Under these conditions and in this manner she was detained from 9 a. m. until about 8 p. m. of the same day, when she was sent home in charge of a nurse. The overwhelming weight of the evidence was that no threat was made; that the plaintiff was not locked in her room and suffered no wrong or indignity, except that she was told she could not leave until her bill was paid; that she passed the period of her detention quietly on her bed in her room, the door of which was open, she being detained—as the jury found, and as it was authorized to find under the evidence—merely by force of the defendant's command that she should not go until her bill was paid. That the plaintiff suffered a wrong for which she should be compensated must, in the circumstances, be conceded. But the jury acquitted the defendant of malice. The plaintiff's wrong, then, must be referred to the defendant's misapprehension of the propriety and the right of the situation presented—at least malice could not be predicted of what it did. It could not be doubted that the plaintiff was sick and nervous at the time of her detention, and this fact was due

to be taken into consideration in the assessment of compensatory damages; but the court feels assured on consideration of the expert medical testimony, that the nervousness, the excitement when at work, and the "nightmares" from which she suffered after her return home, were the result of her disease, not of any violence or the wrong done by the defendant or its agents. She recovered a judgment for damages, the amount of which is not stated by the supreme court, but which it holds was excessive, attributable to the jury's mistaken estimate of the proprieties of the case. In these circumstances, the court holds that the damages should be reduced to a reasonable maximum, which it places at $1,500 with interest added from date of the judgment.

GOVERNOR SMITH SUPPORTS HIGH MEDICAL STANDARDS

The following paragraph from Governor Smith's message to the 1926 session of the legislature of the state of New York will be much appreciated by all interested in maintaining high standards of medical licensure:

"I renew the recommendation of a year ago that careful consideration be given to the protection of the people of the state from unlicensed and unqualified persons practicing medicine. The co-operation of the medical profession is an essential factor in the protection of the public health, as well as in the care of the sick. A very large part of modern public health is urging people to get the advice of their physicians before serious and perhaps incurable conditions have developed. Such effort comes to naught if unqualified persons are allowed to hold themselves out as physicians. The subject is a difficult one, but the state of New York should take the lead in establishing high standards of medical practice and providing a practical plan for their enforcement. It is a matter of justice to qualified physicians and of protection to the public."—National Board Medical Examiners Bulletin.

REICH DOCTORS LACK WORK

Germany's problem of finding jobs for the unemployed includes placing a large number of physicians registered as practicing but who are unable to find patients.

On account of changed standards of living about 85 per cent of the sick take advantage of their privileges as members of city and state clinics, for their services in which doctors are paid either a low salary or a minimum fee amounting to about 20 cents per patient.

The increase in the number of doctors is accounted for by the advantages offered during the war to those wishing to take a course of instruction.

Doctors are collected thickest in Berlin, where there is one for each hundred persons.—New York Times.

DRUG ADDICTION

Sir William Wilcox, in a presidential address before the Society for the Study of Inebriety said that drug addiction was not very prevalent in England but in parts of the British Empire were places where addiction drugs were being grown and produced and in parts of the Empire drug addiction was very prevalent. In America drug addiction was a serious problem indeed, and it had been estimated that in the United States there were more than a million drug addicts and in the City of New York 1.8 per cent of the population were addicts.

Sir William added that drug addiction is a disease rather than a vice and like other diseases it is infectious. It is spread by psycotherapeutic methods, one person involving another. We are immeasurably more successful in England in controlling traffic in addiction drugs than the Americans and an enormous amount of drugs reached America by illegal ways.

LICENSING OF FOREIGN PHYSICIANS

The Journal of the American Medical Association comments on the question of licensing foreign physicians. Formerly United States welcomed foreign physicians. It was a recognized fact that the medical schools of foreign countries furnished a more thorough and more careful course of instruction than our own schools. In the days before the reorganization of our medical colleges foreign countries, as a rule, refused to recognize American graduates and they were not permitted to practice without submitting to a partial course of instruction and passing an examination. Finally our American schools by a process of reorganization furnished a course of instruction that compared favorably with those of foreign countries.

Since the World War many physicians from foreign countries have come to the United States seeking licensure because of the financial stress in their countries from which they are endeavoring to escape. Among them there are an unusual proportion whose credentials were of doubtful validity or even fraudulent, therefore to protect our own interests and guard against foreign physicians coming to our country poorly prepared, it apparently has become necessary to require an examination for a licensure.

SPREAD OF TYPHOID FEVER BY TOURISTS

According to the Charles City Press, typhoid fever is being spread by the great increase in motor touring and camping. Many tourists have become infected with the disease and given it to others in turn. This is a fact that should be carefully observed by motor tourists as an element of danger. It would be wise if tourists would submit to an immunizing injection of antityphoid vaccine.

AMERICA THE HOME OF THE FADDISTS

Dr. Morris Fishbein, editor of the Journal of the American Medical Association delivered a lecture on the general subject of "faddists" before many medical societies. The Journal-Lancet copies from the St. Paul Pioneer Press some of the things that Dr. Fishbein said.

Dr. Fishbein with his great opportunities as editor of the A. M. A. Journal makes a specialty of the many curious things that come to his attention in editing this great Journal and among them we present the following abstract.

"Of all the nations of the world, the United States is most afflicted by its healers. Besides those holding the degree M.D., a host of queer practitioners pervades the medical field. They have conferred on themselves strange combinations of letters, indicating the peculiar systems of healing which a somewhat lax system of legislation and law enforcement permits them to practice on an unwary public. One of the marks of the charlatan is the use in advertising of such an alphabetic appendage.

"Cult follows cult and quackery succeeds quackery with amazing rapidity. Many cults seem to be definitely confined to small districts and fail to come to light even in a careful investigation. Then, too, a single commercially successful cult like chiropractic—itself the child of osteopathy and magnetic healing—gives birth to many offshoots which again propagate more bizarre offspring and unusual hybrids. A complete picture of the farcical scene would require endless research. The United States unquestionably bears the palm in every class so far as healing cults are concerned."

THE ABUSE OF REST IN CARDIAC THERAPY

Dr. William D. Reid in the Boston Medical and Surgical Journal for June 3, 1926, admits that he frequently resorts to rest in diseases of the heart but that rest may be of particular harm and insists that rest is too frequently or too strenuously applied to cardiac therapy. "Instances are met where physicians have advised the sole bread-winning member of a family to give up his work and go to bed for a period of months, although subsequent examinations by other physicians has failed to disclose sufficient indication for such treatment. The continuance of such patients at their employment has been approved and subsequent observation over a period of years has shown that no detriment but even improvement has resulted."

Dr. Reid points out some of the indications for rest and states; "the presence of heart failure of a sufficient degree or evidence of heart infection in an active stage are perhaps the chief indications for rest". "The presence of heart failure of moderate severity, particularly if not persistent, is not, of course, incompatible with the patient being up and about. No absolute rule can be given; one must individualize with each patient and carefully weigh the pros and cons of restriction to bed."

Dr. Reid in this interesting paper presents reasons for the views which he holds in relation to rest in heart disease.

RAT BITE FEVER

The American Journal of Tropical Medicine for March, 1926, presents some interesting facts in regard to this disease.

While the disease known as rat-bite fever has been recognized as such for some time, only recently has any work been done to establish its etiology. In 1916, Futaki and others reported the presence of spirochetes in patients affected with this malady and demonstrated an organism in cutaneous lesions and in lymph glands, naming the organism spirocheta morsus muris. They were able to communicate the disease in rats, monkeys and guinea-pigs.

The spirochete obtained by the author, morphologically resembled spirocheta morsus muris, very closely. "It is a short but rather thick organism. The body tapers at each end to a point from each of which arise one or more flagella. The average length of spirochete is 2.5u. The shortest form observed by us was 1.5u, whilst the longest measured 4.0u. When observed in a fresh blood preparation the motility is exceedingly rapid which has been aptly compared to that of a vibrio by Futaki. Progression takes place in either direction. When the organism becomes entangled in a mesh of fibrin the typical corkscrew spirochetal movements of the body become apparent. The spirals are very regular, 2.3 being the average number of curves per organism. The spirochete is readily stained by the ordinary aniline dyes, such as methylene blue and carbolfuchsin. Giemsa solution is a very satisfactory stain. For demonstration of the flagella none of the above methods are suitable. However Fontana's silver impregnation method gives very good results."

It was found that white mice and rats are readily infected with the spirochete and while the animals show no outward symptoms, they harbor the organism in their blood for a long time. Guinea-pigs inoculated with this organism after six to fifteen days develop fever, enlargement of the lymph glands, inflammation, and later induration of the external genitals and loss of hair. Rabbits did not all develop symptoms but their blood was infected for three weeks after the injection.

The organism found by the present author so closely resembled that of Futaki that it was felt to be the same one, or one closely allied. They were alike in morphology, motility, and staining reaction. In mice and rats the infection presents the same characteristics.

Spirocheta morsus muris has been found in the blood, lymph glands, cutaneous lesions, kidney, and adrenal of humans. While the number of cases in

humans in which this organism has been demonstrated is small, the number of animal experiments has been large enough to prove its presence. Guinea-pigs have been found to develop a disease which more closely resembles that in man than do rats or rabbits.

Salvarsan is a true specific remedy in human infections of this organism, as has been confirmed by many authors in various parts of the world.—Abstract by the International Medical Digest.

PHYSICIANS' HOME INCLUSIVE

In support of a plan organized in New York City for the care of old and impoverished physicians, the following statements are made:

It has been computed by conservative physicians that 40 per cent of service is gratuitous, either to voluntary service or through clients failing to pay the doctors' bill. Over $135,000,000 in charity service is given annually, of which New York City contributes $16,000,000 annually.

This effort to secure a home is not confined to New York City but to physicians throughout the entire country and these figures are offered to show why it is so many physicians fail to provide for their old age and disability. The figures above given refer to New York City but it is estimated that 50 per cent of loss occurs outside of the city of New York. In character with the loss due to service rendered the actual poor there is another element that enters into the question of service: the unpaid bills of those who are well able financially to meet their obligations to their physicians. With this situation of unpaid bills in mind, there does not seem to be any question as to why so many physicians eke out meager existences, that many—the majority—die without estates and that many become public charges because of financial distress. There is in addition to this, the cost of living which is constantly rising and not a few doctors have to enter alms-houses and that those capable of it have to seek employment in other lines in order to maintain themselves decently.

The Men of Pure Science

Again, there is an aspect to the situation which presents a problem that never can or will be solved in the approach that is being made to solve problems of similar kind these days; that is the problem of the man of pure science—the man who devotes himself to the science of medicine and employs his time digging and delving in the laboratory to seek some panacea for the existent ailments of life, or who, built in more heroic mould, submits himself to the torture of disease through inoculation, that he may record the symptoms, and that his brother physicians may record the progress of disease in him, so that mankind may be benefited as the result of his sacrifices and studies.

To evaluate this service of the physician is something beyond the power of figures, or dollars or cents, because there is the jeopardy of life always, and who can say as to the value of a life given in this manner?

The next element is that of the man who through pure service to the public is stricken down, who has to leave his bed at the call of the patient at unseemly hours; who answers call after call in this manner, totally unmindful of his own physical well-being, knowing only that some one is suffering and that his duty is to relieve that suffering. When this man becomes aged, penniless and is incapacitated from going the daily round of the old family doctor, should there not be some place to which he may go; some place to which his eyes may turn in hope and solace?

And then as to the good wife, who has shared his burden through life, and whose warnings and entreaties have fallen upon deaf ears, the only call being heard being that of service—what is to become of her? Is she to be sent to the poor-house over one hill, and he to be sent to another over the other hill, and thus these twain parted at a time of life when the affectionate companionship of years should solace their few remaining days?

Is this to be their lot?

What is to become of the vaunted ethics, the service and the pride of the medical profession if this be permitted?

To take care of one's own is a natural impulse; to take care of others is called charity, but to take care of those who sacrifice their health, their strength, their years, their service, in behalf of the public or in behalf of their profession—this calls not for charity, it is a call to duty.

Today there is reported a dearth of physicians throughout the country. There are hundreds of communities where one doctor has to serve many such.

The poor compensation, bad debts, unseemly hours, the personal hazards to health, limb and life do not compensate a physician these days as against other professions, so doctors are becoming fewer proportionately in the rural districts.

And this is no wonder, because according to the American Medical Association, from figures printed sometime ago, $1,000 was the average earnings of a doctor.

BLADDER INJURY DURING HERNIA OPERATIONS

Large, irreducible, or strangulated hernias often present unusual difficulties, sometimes taxing the skill of the most experienced operators. The danger lies in accidental injury to the bladder, intestine, blood-vessels or vas deferens. The bladder is involved in about 1 per cent of all inguinal hernias in adults. In certain cases, it is only by a most careful examination of the sac that bladder injury can be avoided. Bladder wall should be suspected when the sac is thick, when it is covered by a quantity of lemon-colored properitoneal fat, or when there are

numerous blood-vessels on its surface. When the bladder is in the sac wall, it is nearly always on the inner side, and for this reason the sac should always be opened at a thin white point on the outer side.

—Leigh F. Watson, American Journal of Surgery.

DR. ADOLF LORENZ

Adolf Lorenz was born in Silesia, Austria, in 1854. He graduated from the University of Vienna in 1880 and later became professor of surgery in that institution.

His interest became attracted to the special field of orthopedic surgery and in this field he began to devote particular thought and research to the problem of the reduction of congenital dislocation of the hip.

He formed an association with Bradford, of Boston, and of Hoffa, of Berlin, and they studied the subject together. They finally announced that they had devised a satisfactory open operation for the treatment of these cases and then, just at the psychological moment, came the announcement that Lorenz, of Vienna, had devised a closed or "bloodless" method for the treatment of these unfortunate cripples which would afford better results than any procedure then known.

In 1895 he published a treatise on "Dislocation of the Hip", and his method of "bloodless" reduction received the approval of the Berlin Medical Congress.

We have had cripples of this character from time immemorial but most of them lacked the means to employ the services of famous foreign specialists.

In 1902, however, the parents of Lolita Armour, who was born thus handicapped, having heard of the remarkable cures which were being obtained by the Viennese professor, and being so well supplied with this world's goods that price was no object, sent for him to come to this country and perform his operation on the little girl.

He came (for a fee popularly reported to have been $100,000); he procured his license to practice medicine and surgery in Illinois; he operated; the operation was successful and much kudos accrued to him thereby.

Be it said that, while he was in this country at that time, he performed the same operation on many poor children in Chicago without making any charge whatever. Some of us who were students at that time remember him—a heroic figure of a man, with his great beard and his powerful, skillful hands—and the work he did made a profound impression upon us.

His method did not, however, go unchallenged in this country. It was received with coolness at first and, later, with open skepticism. It is interesting to note that those who have spent most time and study in perfecting themselves in the technic of this treatment are the ones who most cordially recommend it; while its opponents are largely among those who have had least training and experience in doing this kind of work.—Clinical Medicine.

TRAINED NURSES

A report published in the Chicago News indicated that the Illinois State Association of Nurses, first district, has just put into effect a new policy under which its members are refusing to accept twenty-four hour duty when called on as private nurses by patients in hospitals. The demand means that a person requiring continuous attendance must employ two nurses where formerly he paid only one. For at least five years there has been increasing uneasiness among the medical profession and the public over the changing attitude of the nurse toward her vocation and her labor. What was formerly distinctly an auxiliary in the care of the sick has become split into a dozen professions and specialties, with increasing attention to management and decreasing attention to individual service. There are now nurses engaged in public health work, social service, laboratory technic, mental investigation, dietetics, roentgenology, anesthesia, hospital management, teaching and many other positions. Too few nurses who enter the training school have their thoughts focused on the ideal of personal service to ailing humanity. Rather, it would seem, they are stimulated to the securing of one of the dignified positions that lie within the categories mentioned. Obviously, by this development, the care of the individual sick person has suffered. The possible lack of this care is responsible for the unrest that pervades medical and lay circles in the matter of nursing. At the last annual session of the American Medical Association, the House of Delegates particularly requested the board of trustees to look into the nursing situation and to appoint a special committee for the purpose. On previous occasions, other investigative bodies have rendered reports. Granted that there is need for such highly specialized nursing administration as has been mentioned, the needs of the individual sick are primary ones. Apparently, nurses are being trained in technical matters to a point at which dignity suffers when they are asked to undergo the tribulations of personal service. The modification of curriculums should tend to the development of more nurses who will consider the care of the sick their highest ideal.

—Journal A. M. A.

REPORT OF THE COMMITTEE ON PUBLICATION OF THE NEW YORK STATE JOURNAL ON MEDICINE

It has been announced that the New York State Journal will be published twice a month.

Receipts and expenses, exclusive of stenographers' salary and incidentals, for 1925, is as follows: Advertisements and sales, $18,802.17; expenses, salary of editors, $5,150.00; printing, postage, $27,675.93; commissions, $4,287.42.

LUNG ABSCESS DUE TO OPERATIONS ON UPPER RESPIRATORY TRACT

Dr. Wyman Whittemore in "Surgical Clinics of North America" calls attention to the danger of operating on the upper respiratory tract under general anesthesia and presents statistics gathered at the Massachusetts General Hospital.

"The most common factor in our series of lung abscesses at the Massachusetts General Hospital has been the precedence of an operation on the upper respiratory tract under a general anesthetic. Out of thirty-two cases in which etiology was definite, seventeen were due to the removal of tonsils, one to the removal of adenoids only, and three to the extraction of teeth; this giving a total of twenty-one cases, or 65 per cent, due to this cause. I wish to lay great stress on this, and again bring to the attention of the general practitioner who does such operations, as well as to the specialist, the fact that there is a real danger of lung abscess, and what starts out to be a simple operation, at least in the layman's mind, ends as a most serious surgical condition, and in a certain number of cases as a terrible tragedy."

Lisbon, Iowa, July 20, 1926.

Dr. D. S. Fairchild, Editor,
Journal State Medical Society.

I am in my eightieth year and was approached by one of the slick solicitors for a collection agency.

(Pardon my mistakes, doctor, for I am nearly blind.) This solicitor represented that his company had special means of finding lost addresses and of collecting their long outlawed accounts and notes. Every doctor has thousands of dollars of these outlawed notes and accounts so I gave him not far from a hundred of the notes and accounts for which he sent me a list of the accounts and notes without date of the transfer. I do not think I ever signed any such protocol as the following article, nor any such as he claims that the undersigned agrees to allow said company a docket fee of one dollar and twenty-five cents for office filing on each account listed. Take notice—on each account listed. By actual count I have forty-seven claims with them for collection which figured at $1.25 per claim would amount to $59.75 without a single collection.

I do not object to the regular collection fees but I do protest against that $1.25 filing fee.

I regret troubling you so much. But I would like to know whether many doctors have had trouble, and do you have any literature giving the experience of our State Society with them, and what is your advice as to procedure?

I think I gave my claims to the company at some time in September, 1925, my papers give no dates.

They have have collected $34 for me so far.

Kindly advise me.

Respectfully yours,
E. Burd, M.D.

An institution giving its name as Creditors Adjustment Company and its location 217 and 220 Bankers Trust building, Des Moines, Iowa.

Gives the following as a heading, with no date: Creditors Adjustment Company, Bankers Trust building, Des Moines, Iowa.

In consideration of services to be rendered by the Creditors Adjustment Company at Des Moines, Iowa, the undersigned hereby assigns to said company the within described claims for collection and gives unto said company full power and authority to settle the same; and the undersigned agrees to allow said company a docket fee of one dollar and twenty-five cents for office filing on each account listed, which shall be paid or retained out of the first collection, whether received by said company, or the undersigned; and to allow said company commission upon the accounts collected as follows: For the first one hundred dollars at the rate of 50 per cent; for all above one hundred dollars, at the rate of 10 per cent; for all amounts collected on out-lawed claims, or by partial payment at the rate of 50 per cent. Said company shall have employed reasonable means for collecting any claim, without the assistance of counsel. Said company may place any such claim in the hands of its legal department for collection, and if said company shall in such a case assume the responsibility of costs or counsel's fees, the undersigned agrees to allow said company a commission of 50 per cent upon the amounts collected on any such claim in lieu of the commission specified above. Such commissions shall be paid regardless of whether payments on said claims are made to said company or to the undersigned. If payments are made to the undersigned the commission shall be remitted to said company, at the office in Des Moines, Iowa. In the event the undersigned refuses or neglects to furnish notes, itemized statements, or information relative to any claim after having received a request for same, or withdraws any claims after having assigned the same to the said company the commission thereon shall be paid to said company the same as if said company had collected said claims in full, but otherwise the undersigned will not be required to pay said company any commissions on any claims unless collection is made. No solicitor has authority to alter this agreement, stipulate, or accept any money on accounts listed hereon from client or debtor. It is understood that any additional claims which the undersigned may list with the said company for collection within one year from date hereof will be accepted by said company under the terms of this agreement.

Clinton, Iowa, July 28, 1926.

Dr. E. Burd,
Lisbon, Iowa.
Dear Doctor:

I remember you very well as one of my old time friends, who are now getting very few in number.

Referring to the collection company located in the Bankers Trust building, Des Moines, I have to say,

that I know nothing at all about them. I have never patronized these companies, on the theory that very little could be gained and much ill feeling engendered; this is particularly true of doctors.

The Doctor's whole course of action is to accept and render service, without much thought or consideration for money, and when at last collection becomes a necessity, there will be some one willing to serve the Doctor for his company's gain, leaving the Doctor to reconcile ill feeling. The Doctor has employed every gentle method to persuade his one time patient to pay, but without success, and in disgust turns these accounts over to a collection agency as almost hopeless. The collection agency does not function as a public welfare agency, but as a cold-blooded business concern quite foreign to the Doctor's ideas of service. I am inclined to believe that the present generation of medical men are inspired by more efficient methods of securing what is due them. I almost fear, Dr. Burd, that we old fellows are out of tune with present methods and conditions, but may be satisfied that we are still alive and are intelligent if not approving observers.

Editor.

BILL COLLECTOR FINED

Perry, Iowa, September 11, 1926.

Journal of the Iowa State Medical Society:

We are enclosing a clipping from the Perry Daily Chief, Perry, Iowa, concerning F. L. Belt, bill collector. One of our members having read an article regarding Mr. Belt, in a recent issue of your Journal, thought our experience might be interesting and of benefit to your readers and requested that a copy be sent to your office.

Very truly yours,
Perry Chamber of Commerce,
Helen J. White, Sec'y.

F. L. Belt, bill collector of Waterloo, Iowa, was fined $50 and costs this morning in Justice Heiss' court on a charge of petty larceny. That charge of forgery being dropped by the plaintiff on advice of county attorney Blake Willis.

Belt had collected a bill owed to Dr. T. Biddison in the amount of $19 and had endorsed the check, cashing it at the bank. In endorsing the check he had signed his own name beneath the doctor's. For this reason the charge of forgery was dropped.

The money which he secured however was never paid to Dr. Biddison and Sheriff Nuzum made a trip to Waterloo where he arrested Belt last Wednesday. He was released last Thursday under $500 bond to appear for trial next Thursday on request of the defendant the trial was advanced to this morning.

Belt paid his fine and costs this morning which in all amounted to nearly $100.

SOCIETY PROCEEDINGS

Missouri Valley Medical Association

At the recent meeting of the Missouri Valley Medical Association the following gentlemen were elected officers for the following year: President, Dr. F. G. Orr, Kansas City; first vice-president, Dr. Fred Moore, Des Moines; second vice-president, Dr. James M. Patton, Omaha; treasurer, Dr. O. C. Gebhard, St. Joseph, Missouri; secretary, Charles W. Fassett, Kansas City, Missouri.

A committee consisting of Dr. Granville Ryan, Des Moines; Dr. T. G. Orr, Kansas City, and Dr. Donald Macrae, Jr., Council Bluffs, was appointed to consider a plan of reorganization for the purpose of extending the field of operation.

MEDICAL NEWS NOTES

It is reported by the State Department of Health, that sixty-five cases of rabies have occurred in Iowa since the beginning of the year.

The bobbed-haired social-mad mother came in for severe censure by Dr. Everett D. Plass, head of the University of Iowa department of obstetrics and gynecology, who voiced alarm at the increasing tendency of married women to forsake the home for social or business careers.

Dr. Plass, one of the newest members of the Iowa medical staff, classed Iowa City as a center "of feminism".

Dr. Norman F. Miller, an associate professor in the same department contributed another angle to the controversy when he stated that gymnasium work for women in colleges and in high schools has had a very noticeable beneficial effect in retarding infant mortality. Dr. Miller said: "While the death rate of babies under a year of age has diminished enormously during the past forty years, the death rate among the babies of less than one month old has remained about the same. From this we gather that although the better health of women has been a very important factor in saving the lives of babies, even more important is the care given to prospective mothers in health clinics and the dissemination of knowledge about the care of children."—Davenport Democrat.

A farewell dinner in honor of Dr. Thomas E. Livingston, Livermore, will be given at the Country Club clubhouse in Algona, by the County Medical Society. Doctors and their wives from points throughout the county are expected to attend. The Algona Advance says that Doctor Livingston has for forty years served patients in southwest Kossuth. Most of that time he was located at Bode, but for the last five or six years he has been at Livermore. He plans to retire in a few weeks and move to a farm he owns near Portales, New Mexico. Doctor Livingston was licensed in 1887, and settled at Bode

shortly afterwards. He was born at Livingston, Wisconsin.—Humboldt Republican.

Dr. D. J. McCarthy of Davenport has been signally honored by one of the highest titles that can be conferred upon a Catholic layman, in a brief from Pope Pius XI dated August 18, 1926, which bestows upon him the Knighthood of the Order of St. Gregory the Great. He is the first layman in the diocese of Davenport to be elevated to this rank.

The papal distinction comes to Dr. McCarthy in recognition of the services he has given to his church and to society. And it is not the first time Dr. McCarthy has been chosen for honors. It will be recalled that Dr. McCarthy at once responded to the call for professional men at the time the United States entered the World War, and that during the conflict he concentrated his humanitarian efforts in the Near East.

For splendid services rendered in the military hospitals of Rumania, Queen Marie conferred upon him the Order of Regina Maria while for his efficient and untiring labors in the Serbian Army, he received from King Alexander of that country, the Order of the White Eagle. He was also granted the unusual distinction of being made honorary major in the Serbian Army, first Jugo-Slav regiment, first division of the Serbian Army.

Accordingly those who have recognized Dr. McCarthy's distinctive service to humanity at home and his consistent and zealous labors for the Catholic church during his twenty-five years' residence in Davenport, feel that this high honor from His Holiness in addition to military recognitions already accorded, is but a just reward for a good work well done.—Davenport Times.

Dr. J. A. White, the veteran physician of Olin, and his wife recently returned home after a year's stay in California. The Doctor is a Canadian by birth, but became so much of an American as to spend four years as a soldier in the Civil War. He studied medicine after the war, and commenced practicing his profession in Jones county at what is now the town of Olin, in 1871, where he performed the duties of a widely scattered and laborious country practice until his retirement a few years ago. Notwithstanding the hard work and exposure he has now counted off eighty-six years, and has the agility of a man a quarter of a century younger.

There is one thing in his mental attitude that we always liked. He had opinions, and he was never afraid to express them. His friends may not have always agreed with him, but they did always know where to find him. He never gained the questionable reputation of being a pussy-footer. He was a hard and resourceful fighter in a cause he thought was right, but he always fought fair, and in the open. Dr. White became indebted to Monticello for his wife—Miss Virginia Herrick, then a teacher in our public school—who has passed the golden wedding milestone with her husband.

Dr. White had his war service in Co. E, 11th Iowa Volunteers. He entered as a private and left the service a lieutenant. He participated in the battles of Shiloh, Corinth, Iuka, Siege of Vicksburg, Atlanta, Bentonville, and in Sherman's march to the sea.

In an interview published recently in the Cedar Rapids Republican, the Doctor spoke well of his long California visit, and the agreeable climate. He was quoted as saying, concerning the numerous Iowans in California, that "they made their money in Iowa, and if they hadn't lived in Iowa, they wouldn't have had enough money to live in California."

Dr. White comes of a long lived family, and here is hoping that he may break the longevity record of all his ancestors.—Monticello Express.

HOSPITAL NOTES

A Maternity Hospital at Sioux City which was closed July 1st, it is said, will open as soon as it can install modern equipment.

PERSONAL MENTION

Dr. Leonard Paul Ristine of Maquoketa has located in Fort Dodge. Dr. Ristine is a graduate of the School of Medicine, Iowa State University. He is a son of Dr. Ristine of Maquoketa.

Dr. J. W. Kime of Fort Dodge, independent candidate for the legislature for Webster county discusses with Mr. Rutlege, the republican candidate, the question of hard surface roads and gravel roads, in the usual Kime manner. We take it that Dr. Kime is the friend of the farmer and favors gravel roads.

Dr. C. S. Chase of Iowa City, emeritus professor, was the guest of Dr. E. W. Meis of Sioux City recently, and was made the occasion of a gathering of Iowa University medical graduates.

Dr. T. E. Davidson, formerly of the Mayo Clinic, has become a member of the Park Hospital Clinic, Mason City, in the department of surgery.

Dr. Arthur G. Planker of the Mayo Clinic, has associated himself with the Dubuque Medical and Surgical Clinic. Dr. Planker is an overseas veteran, having served with the Mayo Clinic and University of Minnesota Base Hospital Unit in France. Later he associated himself with the Polish Medical Corps. He is now practicing at the Dubuque Clinic.

Dr. L. E. Weber has located in Wapello. He is a graduate of the State University of Iowa.

Dr. Grace M. Hawthorne, a graduate of the University of Illinois, has located in Ames. She formerly practiced in Chicago and St. Louis.

Dr. Arthur R. Abel has accepted the position of pathologist to the Methodist and Lutheran Hospitals, Sioux City.

Dr. Norman F. Miller of the University of Michigan has been appointed an associate professor in the

department of obstetrics, Iowa State University Medical School.

Dr. C. N. Swanson of Henry Ford Hospital, Detroit, Michigan, a graduate of Harvard, and Dr. J. T. Williams of New Haven General Hospital, New Haven, Connecticut, a graduate from Johns Hopkins, have been appointed instructors in the department of obstetrics, Iowa State University.

Dr. William Rankin of Keokuk has returned from a tour of medical study in Europe.

Dr. V. A. Farrell of the Park Hospital Clinic, Mason City, has resigned from the clinic and will maintain an office in the M. B. A. building.

Dr. Herbert Rathe has become associated with Dr. W. A. Rohlf of Waverly, in the practice of medicine. Dr. Rathe is a graduate of the Iowa State University Medical School.

Dr. George D. Hart of Otho, celebrated his ninety-first birthday, July 26. Dr. Hart has resided in Ohio seventy-two years.

Dr. F. Kirk Burnett, a recent graduate of the Medical School of the University of Nebraska, has located in Clarinda for the practice of medicine and surgery.

Dr. R. F. Sparks of Waverly, Iowa, attended the clinics of the American College of Surgeons at Montreal the week of October 25. At that time he received his Fellowship in the college.

MARRIAGES

Dr. H. N. Anderson of Independence and Miss Genevieve Schug of Strawberry Point, were married July 22, 1926, at Dubuque. Dr. Anderson is a graduate of the University of Iowa Medical School.

Dr. Wesley J. Morrison of Cedar Rapids and Miss Clara Clark of Riceville were married at Grace Episcopal church, Cedar Rapids, July 27, 1926.

OBITUARIES

Dr. Henry Armstrong Brown died at his home in Iola, August 30, 1926. He was born in Burlington, Iowa, May 15, 1831, studied medicine with Dr. Sturdivant and graduated from the Keokuk Medical College in 1878. Dr. Brown located in Earlton, Kansas. He then moved to Humboldt where he practiced several years, when he came to Iola twenty-two years ago.

Dr. C. E. Thompson of Winterset died at his home September 11, 1926. He had been ill for some time. Dr. Thompson left Newton about three years ago for Winterset, where he has been the head of a hospital. He was thirty-nine years of age at the time of his death.

Dr. W. A. Wright died at his home in Thayer, September 13, 1926. He had been in failing health for several weeks. Dr. Wright was educated in Chaddock College, Quincy, Illinois. He was fifty-eight years of age at the time of his death.

BOOK REVIEWS

A PRACTICE OF PHYSIOTHERAPY

By C. M. Sampson, M.D., Formerly of the Physiotherapy Service, Walter Reed U. S. Army General Hospital, Washington, D. C., Etc., 1926. C. V. Mosby Co., St. Louis, Mo. Price $10.00.

Physiotherapy has found favor in the active armamentarium of thousands of physicians. If the system is to continue in good repute and the maximum good be derived from its practice, a proper and exact technique must be employed. It is timely, then, that a man of Dr. Sampson's experience should present to the profession a completely revised and rewritten volume covering each separate phase of the practice of physiotherapy.

The three opening chapters of this book are written presumably in the defense of the system of physiotherapy. The following chapters, however, present the theory and practice of physiotherapy in a pleasing, straight-forward and authoritative manner. The chapters on Diathermia and Quartz Ray Therapy are especially useful. The second part of the book, devoted to the clinical application of physical agents, is comprehensive and highly optimistic in character. The details of technique presented are quite complete and worthy of the careful consideration of the skilled as well as the novice operator in the field of physiotherapy.

R. R. S.

ABDOMINAL OPERATIONS

By Sir Berkeley Moynihan, K. C. M. G., C. B., Leeds, London, England; Fourth Edition Entirely Reset and Enlarged; Two Octavo Volumes Totaling 1217 Pages, with 470 Illustrations, 10 in Colors. W. B. Saunders Company, 1926; Cloth $20.00 Net.

We may begin by saying what every surgeon knows, that Sir Berkeley is one of the greatest living surgeons and one of the most skillful and most prolific writers, and is as well known in America as in his own country, England.

One of the first things that attracts the attention of the reviewer on opening the book is the fine clear type and high character of paper and the perfect mechanical work.

The first volume is divided into three sections: General Considerations, Operations upon the Stomach, Operations upon the Intestines.

Volume two, section three: Operations upon the Liver.

Section five: Operations upon the Pancreas and Spleen.

Under the head of General Considerations comes the Bacteriology of the Stomach and Intestines upon which Sir Berkeley places considerable stress. The remarkable success of Moynihan in abdominal operations is in considerable measure due to strict attention to details which he sets forth in a clear

and forcible manner. The chapter on Complications and Sequels is one of great interest and should be carefully read by all abdominal surgeons, particularly by the occasional operator. Referring to acute dilitation of the stomach he has been able to secure the best results by frequently changing the position of the patient. Sir Berkeley discusses the importance of carefully placing the abdominal incision with reference to the nerve and muscle fibers in leaving a weakened abdominal wall. Gunshot wounds of the abdomen received much attention during the war and the chapter on this subject is of much interest and importance.

The Surgical Treatment of Visceral Prolapse and Intestinal Stasis. This is a field of operative work that has engaged the attention of surgeons for many years past. Some brilliant results have followed the operation of suspending organs and many failures. The technique is difficult and the care and skill with which this work is done has much to do with the final result.

The surgery of intestinal stasis has been a prolific field for dispute. "The removal of the whole colon is however, sometimes, though I believe very rarely necessary. It may be called for when the entire colon is affected with ulceration, or in cases of the most severe type of Lanes disease", and Sir Berkeley from this point sets forth his own method of operative technique.

Section two: Operations upon the Stomach.

Sir Berkeley is recognized as one of the most skillful of stomach surgeons, his experience has been extensive and the results have been very satisfactory, especially operations for perforating gastric or duodenal ulcers.

The author emphasizes the importance of careful consideration of the technique of the operation as bearing upon the result. Sir Berkeley gives considerable space to intestinal suture as a means of securing the best results in intestinal surgery.

Volume second is devoted to Operations upon the Intestines, Operations upon the Liver and Operations upon the Pancreas and Spleen, and considerable space is devoted to each one of these subjects.

This last edition of Moynihan brings abdominal surgery to date in every respect, and will be a great addition to the surgery of this subject.

MODERN METHODS OF AMPUTATION

By Thomas G. Orr, A.B., M.D., F.A.C.S., Professor of Surgery, University of Kansas; 125 Illustrations; The C. V. Mosby Co., St. Louis, 1926; Price $3.50.

The author states in the preface that he intended to include only those methods that are practical and workable.

Chapter first is devoted to Indications for Amputations and the Preparation of the Patient. In the preparation of flaps in amputation the author recommends, when possible, that the deep fascia should be included. He points out the requisites of a good stump in dealing with the muscles, fascia, nerves, including blood-vessels. Particular attention is given to the treatment of the bone and in the dealing with the periosteum. In regard to drainage he recommends that a drain be used for thirty-six to forty-eight hours after the operation to aid in the removal of blood and serum that may collect beneath the flaps.

Chapter second is devoted to Amputation Stumps. In order to prevent tender stumps and to conserve, in the case of lower extremities, the function of the stump to which useful artificial limbs may be applied. Attention is given to what is known as the guillitone stump.

After presenting general considerations which we have referred to, the author proceeds to the consideration of amputations of the upper extremity. The technique of these amputations are carefully considered. In the amputations of the upper extremity, especially of the hands, every effort is made to save as much as possible. In the amputations of the lower extremity the question of a weight bearing stump is of the first importance.

The last portion of the book is devoted to the consideration of artificial limbs. Amputations are less common than formerly because of the tendency on the part of surgeons to save parts that may be made useful. The surgeon should feel a sense of humiliation in having to amputate a limb but of course there are many crushing injuries where the parts are hopelessly damaged and must be removed. In cases of compound fractures in preaseptic days amputations were much more common than today.

NEPHRITIS

By Herman Edwyn, M.D., Assistant Visiting Physician, Gouverneur Hospital, New York. MacMillan Co., New York, 1926.

In the last twenty-five years our knowledge of the diseases comprised under the term nephritis has been considerably advanced. In proof of this the author presents a book of 347 pages.

Chapter first is devoted to the Physiology of the Kidney.

Chapter second is devoted to the discussion of Renal Insufficiency as determined by various recognized function tests. The technique of these various tests is set forth in considerable detail.

Chapter third is devoted to Hypertension as determined by Blood-Pressure. In this connection is presented a historical account of the investigations of numerous observers. Emphasis is given hypertension as a compensatory mechanism and the commonly stated fact of high blood-pressure does not always take into account the fact that high blood-pressure may be an element of safety.

Chapter fourth is devoted to the consideration of Uremia.

In the classification of nephritis the author considers two forms; first, focal glomerulonephritis, in which only a fraction of the glomeruli are involved

in a focal distribution; and second, diffuse glomerulonephritis. The author devotes considerable space to the discussions of these types of diseases, in fact a considerable part of the book is devoted to these subjects.

A chapter is devoted to the Kidney of Pregnancy, which is always a subject of great importance.

Chapter twelve is devoted to Lipoid Nephrosis and corresponds to the Chronic Parenchymatous Nephritis, or Common Diffuse, non-indurative nephritis of the old writers.

This brings us up to chapter thirteen, the Nephrosis of Amyloid Disease.

Chapter fifteen is of great interest because of the high rate of mortality that exists among persons who have passed middle life, condition known as arteriosclerosis. It is well known that the extension of life has occurred mostly in childhood and early manhood. After the age of fifty there has been little reduction in life expectancy. The strain of business and professional life together with generous living brings about changes in the cardiovascular system. The rigid arteries and the changes that take place in the vessels of the heart are responsible for the numerous cases of sudden death from heart lesions. It is important to study the conditions of life after fifty years of age on account of these changes, and so far we have not been able to reduce the mortality rate at this time of life. This chapter is entitled to very careful consideration. The book is to be highly commended because of its bearing upon everyday life.

DISEASES OF THE NEW-BORN, MONOGRAPHIC HANDBOOK

By John A. Foote, M.D., Professor of Diseases of Children; Georgetown University Medical School; Including Chapters by Prentiss Wilson, M.D.; James M. Moser, M.D.; Wm. F. O'Donnell, M.D.; Frederick J. Eichenlaub, M.D.; John F. O'Brien, M.D., of the faculty of Georgetown University Medical School; Illustrated. J. B. Lippincott Co.

Chapter first presents Injuries and Accidents in the New-Born. This chapter is written by Wm. F. O'Donnell, M.D. The first consideration is that of asphyxia with its treatment, and the second, injuries to the blood vascular system, particularly intracranial hemorrhage; third, injuries to the nervous system, or paralysis, as the late result of cerebral hemorrhage. These are grouped under the head of birth palsy; then comes fractures and other injuries followed by congenital deformities.

Dr. John A. Foote elaborates more fully on the intracranial hemorrhage in the new-born. In this chapter Dr. Foote gives particular attention to the treatment of this condition and prognosis.

Dr. James A. Moser in chapter third considers the Care of the New-Born Child, Food, Management, etc.

Chapter fourth, Problems of Breast Feeding, Normal and Abnormal Infants.

Chapter fifth, Diseases Commonly Seen in the New-Born, the Hemorrhagic Tendency, Pylorospasm and Pyloraxsterosis.

Chapter sixth, Skin Infections of the New-Born.

Chapter seventh, Eye and Ear Infections of the New-Born.

Chapter eighth, Erysipelas, Exanthema, Tetanus.

Chapter ninth, Chronic Infections in the New-Born.

Chapter tenth, Congenital Heart Diseases, Common Deformities and Maldevelopments.

Chapter eleventh, Anomalies of Digestive Organs, Hernias.

Chapter twelfth, Diagnostic and Therapeutic Measures in the New-Born.

Chapter thirteenth, Habit Formation in the New-Born.

Chapter fourteenth, Mortality in the First Month of Life from Birth Injury, Congenital Anomities and Hemorrhages.

Chapter fifteenth, the Problems of Prenatal and Neonatal Mortalities.

This is a useful book to those engaged in general practice, particularly to those interested in children's diseases and diseases and conditions incident to birth. The value of the book is materially increased by the numerous illustrations.

MODERN MEDICINE—ITS THEORY AND PRACTICE

In Original Contributions by American and Foreign Authors; Edited by Sir William Osler, Bart., M.D., F.R.S., Late Regius Professor of Medicine in Oxford University, England. Third Edition, Thoroughly Revised and Re-edited by Thomas McCrae, M.D., Professor of Medicine in the Jefferson Medical College, Philadelphia; Assisted by Elmer F. Funk, M.D., Assistant Professor of Medicine, Jefferson Medical College. Volume Three: "Diseases of Metabolism, Diseases of the Digestive System". Illustrated. Lee & Febiger, Philadelphia and New York, 1926. Price $9.00.

We have on previous occasions called attention to the first two volumes of this great work. Sir William Osler laid the foundation for this system of medicine while he was Professor of Medicine in Johns Hopkins and had in mind the preparation of a new edition when death ended his career. His associate Dr. Thomas McCrae has been able to carry out the plans formulated by Sir William and the work has lost none of its value because of its being re-edited by his associate in Johns Hopkins University.

Volume three of 1052 pages is devoted to Diseases of Metabolism, Including Diseases of the Digestive System. Chapter one of part one "Metabolism from the Point of View of the Practitioner", by Eugene F. Du Bois, M.D. This is a presentation of the sub-

ject of metabolism which will be interesting and important to the practitioner of medicine. This branch of the subject includes 222 pages and in addition to the contribution of Dr. Du Bois other chapters are prepared by Dr. Thomas Futcher and Dr. James M. Anders.

Part two is devoted to "Diseases of the Digestive System", and the several chapters of this part of the work are prepared by such men as Dr. James G. Stockton, Dr. David Riesman, Dr. Chevalier Jackson, Dr. Julius Friedenwold, Dr. Alfred Stengel, Dr. Eugene Opie, Sir Humphry Roleston and others.

There are numerous smaller works on the different phases of the practice of medicine, useful enough in themselves, compressed in rather limited space, but can not take the place of the larger system as expressed in Osler's monumental work.

MEDICAL CLINICS OF NORTH AMERICA

Volume 9; Number 4; January, 1926. Octavo of 381 Pages, with 49 Illustrations. Price Per Clinic Year, Paper $12.00, Cloth $16.00 Net. W. B. Saunders Company, 1926.

This interesting number is from Tulane University, New Orleans. While the subjects treated are of a general character there is as might be expected more than usual of tropical diseases. Dr. George Herrmann presents a rather extended clinical discussion on "The Unusual Manifestations of Heart Disease". Dr. J. Holmes Smith considers "Bismuth in the Treatment of Visceral Syphilis". Considerable interest is being manifested in this treatment. Another subject of interest is presented by Dr. Morris J. Duffy, "Quiniden in The Treatment of Auricular Fibrillation" and Dr. V. J. Thacker takes up the subject of "The Heart in Hyperthyroidism". So it will be seen that the heart is not lost sight of.

BIRTH CONTROL AND THE STATE—A PLEA AND A FORECAST

By C. P. Blacher, M.C., M.A., M.R.C.S. Published by E. P. Dutton and Company, New York, 1926. Price $1.00.

The practicing physician, busy as he is, with clinical problems and the struggle to keep abreast the times in newer practice, rarely finds the time to read long and verbose discussions regarding the subject of Birth Control. Too, these articles are so frequently biased, or the work of an alarmist or agitator that one finds but little of true merit in them.

Blacher in the present small volume of eighty-seven pages has presented, in a very pleasing manner, a summary of the basic arguments both for and against Birth Control. In the latter half of the book he has discussed and analyzed in an unbiased and rational way the various arguments presented. Birth Control is a timely subject and one having a distinctly medical aspect. For the physician who wishes to be informed; who wishes a sensible perspective, and familiarity with this serious subject without extensive research of the literature, this small volume is recommended without reserve.

R. R. S.

INTERNATIONAL CLINICS

A Quarterly. Illustrated Clinical Lectures and Especially Prepared Articles. Volume III—Thirty-sixth Series, 1926. Edited by Henry W. Cattell, A.M., M.D., Philadelphia. Published by J. B. Lippincott Company, Philadelphia and London.

In this volume of the International Clinics are original articles on Diagnosis and Treatment; Neurology, Psychiatry and Psychology; Surgery; Travel, and Biography. Each article is carefully prepared, covers fully, yet briefly, a timely subject and is written by a recognized authority. Included under the section on Travel are the addresses of welcome to the Inter-state Post-Graduate Assembly of North American Physicians while in Europe.

The Biography of The Right Hon. Sir Clifford Allbutt, K.C.B., M.D., F.R.S., by Sir Humphrey Rolleston, Bart., K.C.B., M.D., is a fitting tribute. This one article written in the typically pleasing style of the author, based as it is upon an intimate knowledge and so adequately covering the essential activities of a busy and long life, is in itself worth more than the price of the volume. R. R. S.

LIFE INSURANCE MEDICINE

A Study of Some of its Problems and Their Relation to Clinical Medicine. By Members of the Medical Department of the New England Mutual Life Insurance Company. Volume I, 1926. Published by New England Life Insurance Company, 87 Milk Street, Boston, Massachusetts.

The modern trend in medical practice is towards Preventive Medicine. Much is being written concerning Periodic Health Examinations, and more and more the physician is being called upon to examine the apparently healthy person. The thoughtful physician must readily appreciate that the methods employed and the interpretation of the results obtained, must differ materially in the examination of the sick patient and the apparently well one. In order, then, for the average practitioner to detect and to rightly evaluate the unsuspected abnormalities in the apparently well and be alert in anticipating disease conditions of the future, he must reconstruct, at least in part, his method of reasoning. He must look upon his present findings as "signs of the times" and anticipate correctly the course and outcome of these abnormalities if they remain uncorrected. He must use an intimate knowledge relative to the etiology and course of disease processes but it is equally essential that he know the "expectancy" in various groups of patients. It is not enough for the physician conducting a health examination to assure his patient that his

physiological deviations may lead to "serious illness". The patient rightly expects definite information concerning the specific illness which may result and some very concrete knowledge as to its import in terms of morbidity or mortality. It follows, then, that the physician engaged, to any extent, in Health Examinations must draw freely from the "follow up" work of individual practitioners, hospital clinics and the experiences of Insurance Companies. The most accurate and comprehensive data today, in this regard, is to be obtained from the records of our larger insurance companies.

The profession will welcome and profit by publications such as this one published by the New England Mutual Life Insurance Company. The contributors to this volume are all engaged in medical directorship and each individual article is authoritatively presented from the health examiner's viewpoint. The section, "A Proposed Method of Selecting Risks Among Individuals with Occasional Slight Glycosuria", by Francis H. McCrudden, M.D., is an outstanding resume of our present knowledge of this condition and offers a very practical guide to the detection and classification of these cases. "The Cardio-Respiratory Test", outlined and discussed by Harold M. Frost, M.D., is a distinct advance in the evaluation of minor heart impairment and should receive wide recognition and use, particularly in the examination of persons with but few cardiac signs or symptoms. The six additional original articles contained in the volume are of instructive interest particularly to the physician who is performing or contemplating health examinations. The entire volume is a most commendable contribution of Insurance Medicine to Clinical Medicine.

R. R. S.

TRANSACTIONS OF THE TWENTY-THIRD ANNUAL CONFERENCE OF STATE AND TERRITORIAL HEALTH OFFICERS WITH THE U. S. PUBLIC HEALTH SERVICE

United Public Health Service, Washington, D. C., 1926.

This volume of transactions was prepared under the direction of the Surgeon General of Public Health and contains several articles and a free discussion of many public health questions which will occupy the minds of health officers all over the states of the Union and is worth the attention of all classes of health officers.

INHALANTS

The upper respiratory tract is armed by nature against bacterial invasion, but a little timely assistance when infection is just gaining a foothold is sometimes needed. The medicament used should not be of such a nature as to denude the nasal or pharyngeal epithelium of its protective mucus; on the other hand, it should be of a tonic or slightly astringent character—something that will moderate the catarrhal condition and assist in opening up the congested sinuses, without risk of injury to the delicate tissues.

The styptic or constricting effect of Adrenalin on the superficial capillaries, reducing congestion, is well known, and, although the 1:1000 solution in water is too active for use in rhinitis and related conditions, this concentration in vegetable oils is about right—for the Adrenalin is only slowly released from the vehicle and so a mild but persistent action is to be expected.

In this connection the reader is referred to the advertisement of Adrenalin Inhalant in this issue.

THE POTENCY DATE ON BIOLOGICS

By Dr. John F. Anderson
Director Squibb Biological Laboratories

Frequent inquiries are received at the Squibb Laboratories from pharmacists and physicians asking whether biologics, on which the potency date has passed, might not still be used with safety and confidence. This article is written with the idea of answering this same question as it arises in the minds of other representatives of the professions.

The potency date on biologics is defined in the law, as that "date beyond which the contents (of the packages) cannot be expected beyond reasonable doubt to yield their specific results". The federal regulations governing the fixing of the potency date on biological products have two main provisions. One pertains to those products which have a standard of potency, which can be used at any time to establish definitely the potency and the therapeutic worth of the product. The other provision relates to those products for which there is no standard of potency, or no means of determining quickly by laboratory methods the true therapeutic worth of the product.

In the first class we have the antitoxins, such as diphtheria and tetanus, for which there are international standards of potency. For these products, the government regulations prescribe that for each twelve months' potency-period there shall be added to the contents of the package a definite excess number of units to compensate for the loss in potency on aging, even though not kept under proper conditions. For example, a package of 10,000 units of diphtheria antitoxin, having a potency period of two years, must contain, when finished, at least a 30 per cent excess in the number of units, or a total of 13,000 units instead of only 10,000 units as stated on the label.

It is at once apparent, therefore, that a package of diphtheria antitoxin may be used any time within the potency period stamped thereon, and that the person to whom it is administered will get at least the number of units stated on the label. Should the contents of the package be used after the potency date has expired, it will still be found to be thera-

peutically effective, and at any time within a year thereafter probably will contain within 10 per cent of the original labeled potency.

All will recall that in the diphtheria epidemic at Nome, Alaska, the only diphtheria antitoxin that was at first available was outdated but that its use saved many lives.

There are potency standards for other products than diphtheria and tetanus antitoxin, among which may be mentioned typhoid vaccine, diphtheria toxin for the Schick test, anti-meningococcic serum, anti-pneumococcic serum, anti-dysenteric serum, scarlet fever toxin and scarlet fever antitoxin. However, the standards for all of these products, with the exception of the last, are used only for the purpose of insuring that when distributed the product will exert certain specific effects, as for example, that the anti-pneumococcic serum will protect mice against a certain dose of a culture of pneumococcic, using a standard serum for comparison; or that scarlet fever toxin for the Dick test will cause a positive skin test in a person not immune to scarlet fever.

Usually but little excess volume is put into the containers of these last-mentioned products, for the reason that the methods of standardization do not permit of exact quantitative measurement.

These products, therefore, will show a gradual decrease in potency on aging but this decrease will be much less when the products are kept properly refrigerated. Most of them may be used after the potency date has expired, if due allowance is made in the dosage for the decrease that occurs from aging. No act information is available, however, as to how much this loss of potency is for each product.

Consequently, for those products for which no standards of potency have been established, the government has fixed a definite potency period. These products, which include the various bacterial vaccines, except typhoid, anti-streptococcic serum, leucocyte extract, normal horse serum and similar preparations, probably still are therapeutically active after the potency date has been reached, if they are used in excess of the original dosage.

There is no potency standard for smallpox vaccine, except that it must produce a good "take". Refrigeration is of the greatest importance to maintain the potency of this product. If kept at temperatures above 50° F., the vaccine rapidly loses in potency. Smallpox vaccine should be kept, whenever possible, in a tin box in direct contact with the ice.

Rabies vaccine, Semple modification, being a killed virus, is in the same class as other products for which there is no potency standard. Rabies vaccine, Pasteur, however, has a short potency period and, except for the first seven doses, is only shipped from the laboratory for immediate use.

It will be apparent from this summary of the use of the potency date on biologics that the government regulations have fixed the potency date for various products to insure "beyond reasonable doubt" the therapeutic worth of those products any time prior to that date. It is also clear that the antitoxins and most of the other biological products may be used after that time in cases of emergency, if proper allowance is made by increasing the dosage.

All will realize the importance of constant attention to stocks of biologics, always making sure that those with the shortest potency periods are used first.

RESEARCH ON SURGICAL SUPPLIES

According to Dr. E. R. Weidlein, director, Mellon Institute of Industrial Research, University of Pittsburgh, the firm of Johnson & Johnson, manufacturer of surgical supplies, New Brunswick, New Jersey, has established at the Institute a Fellowship that will study the exact requirements of surgeons and other medical specialists in the way of sundries, with the joint aim of developing new supplies that are needed and of standardizing the products now in use. An investigation will also be made of the process of renovating used supplies, and several other Industrial Fellowships of the Institute will cooperate in devising satisfactory procedures.

Dr. Frederic H. Slayton (M.D., Rush Medical College) will be in direct charge of this comprehensive research. The Fellowship will be operated in a totally unbiased and independent manner, in accordance with the Mellon Institute system, and all its investigations will be conducted primarily for the benefit of the public. It is the plan to report the results in appropriate periodicals as the various phases of the studies are concluded.

In carrying on this work, Dr. Slayton and the Institute's executive staff invite the concurrence of all interested organizations. They are especially desirous of securing the close collaboration of hospital executives and of members of the medical profession.

NEW AND NON-OFFICIAL REMEDIES

In addition to the articles enumerated in our letter of July 29th, the following have been accepted:

The Gilliland Laboratories, Inc.:
- Antistreptococcic Serum 20 c.c.

Lederle Antitoxin Laboratories:
- Poison Oak Extract—Lederle (In Almond Oil).
- Poison Oak Extract—Lederle (In Almond Oil) 1 c.c.

Lehn & Fink, Inc.:
- Pituitary Substance—L. & F. Desiccated.
- Tablets Pituitary Substance—L. & F. Desiccated, ½ grain.
- Anterior Pituitary—L. & F. Desiccated.
- Tablets Anterior Pituitary—L. & F. Desiccated, 1 grain.
- Posterior Pituitary—L. & F. Desiccated.
- Tablets Anterior Pituitary—L. & F. Desiccated, 1/10 grain.

Eli Lilly & Company:
Diphtheria Antitoxin, Purified, Concentrated—Lilly.
H. K. Mulford Company:
Ivyol.
Hypo Units Ivyol 0.7 c.c.
E. R. Squibb & Sons:
Erysipelas Streptococcus Antitoxin Concentrated—Squibb 15 c.c.

In addition to the articles enumerated in our letter of August 27, the following have been accepted:

H. K. Mulford Company:
Digitos.
Digitos Ampules, 1 c.c.
Solution Pituitary Extract Surgical—Mulford.
Ampules Solution Pituitary Extract Surgical—Mulford.
Ampules Solution Pituitary Extract Surgical—Mulford, 1 c.c.
Parke, Davis & Company:
Ovarian Substance Soluble Extract—P. D. & Co.
Ampules Ovarian Substance Soluble Extract—P. D. & Co., 1 c.c.
E. R. Squibb & Sons:
Ipral.
Ipral Tablets, 2 grains.
United States Radium Corp.:
Ampules Radium Chloride, 2 c.c.—United States Radium Corp. (radium element, 50 micrograms).
Ampules Radium Chloride, 2 c.c.—United States Radium Corp. (radium element, 2 micrograms) for drinking use.

PROPAGANDA FOR REFORM

Anti-Phymin—This, modestly described as "the healing gas" and "the greatest curative agent known", is at present prepared by the Phymos Chemical Laboratories of Pensacola, Florida. It is said to be "nonpoisonous to the fullest extent"—whatever that may mean. As is common with quacks, the exploiters of Anti-Phymin have a simple explanation for the complex facts of pathology. All disease, according to the Anti-Phymin thesis is caused by fermentation. Anti-Phymin, it is claimed, stops the fermentation—and there you are. Anti-Phymin is said to be the discovery of one Cock. In 1916, he was conducting the "Cock Camp Colony and Laboratories" at Kingsland, Texas. This was a "consumption cure" affair in which Anti-Phymin was a part of "the system of treatment". Now, Anti-Phymin is recommended for such a broad field as sore throat, pyorrhea, asthma, "disorders of the stomach", poisoning, "disorders of the kidney and liver", diseases peculiar to women and venereal diseases. It is also claimed to have cured many cases of pulmonary and bone tuberculosis and is recommended for gall-stones, pellagra, appendicitis and diabetes. The A. M. A. Chemical Laboratory examined Anti-Phymin and found it to consist of a dilute solution of sulphurous acid and, necessarily, a small amount of sulphuric acid. This shows that Anti-Phymin belongs to the class of "Liquozone", "Radam's Microbe Killer", "Oxytonic", "Septicide", "Zymatoid" and other nostrums containing as their essential ingredient, sulphuric and sulphurous acid. (Jour. A. M. A., August 15, 1925, p. 535.)

Calcium in Tuberculosis—Calcium salts have been administered in the treatment of tuberculosis for various alleged reasons: to remedy calcium deficiency; to lessen inflammatory exudate; to favor calcification of lesions; and to lessen sweating and diarrhea. But calcium is not considered as an essential remedy by critical students of the subject. (Jour. A. M. A., August 15, 1925, p. 539.)

Rheumeez Not Accepted for N. N. R.—The Council on Pharmacy and Chemistry reports that "Rheumeez" (Casco Laboratories, Elizabeth, N. J.) is claimed to be magnesium cinchophen, the magnesium salt of 2-phenyl-quinolin-4-carboxylic acid. From the advertising issued for the product, one gets the impression that the production of the magnesium salt of cinchophen is a noteworthy achievement on the part of the Casco Laboratories and that the product is superior to cinchophen. However, this compound is the analogue of the well known cinchophen-sodium. When a solution of Rheumeez is treated with dilute hydrochloric acid, cinchophen is precipitated: therefore the compound will be decomposed in the gastric fluid of the stomach and its administration will be equivalent to the administration of cinchophen accompanied by an insignificant amount of magnesium. The Council found Rheumeez unacceptable because (1) it is an unessential modification of the established drug cinchophen; (2) it is marketed under a nondescriptive therapeutically suggestive name; and (3) it is advertised with unwarranted and misleading claims which will lead the public to attempt self-medication in conditions which require the diagnosis and supervision of physicians. (Jour. A. M. A., July 11, 1925, p. 132.)

The Quantitative Accuracy of Medical Tablets—Attention has been called repeatedly to discrepancy between the actual composition and the claims made for various tablets and pills sold to the medical profession. Variations as high as 54 per cent above and 70 per cent below the label statement of composition has been found. Two associations of pharmaceutical manufacturers have appointed a joint committee which collaborates with the government authorities in an attempt to bring about improved conditions. During the past years, attention has been given by this group to the composition of hypodermic tablets. As a result of this study, plans for controlling the degree of accuracy of hypodermic tablets have been issued by the federal Bureau of Chemistry in which is given a maximal permissible variation, ranging from 7.5 to 9 per cent. The fact that the pharmaceutical industry collaborates with the governmental authorities in the establishment of standards is encouraging. (Jour. A. M. A., July 11, 1925, p. 118.)

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THE DIAMOND JUBILEE*

Walter L. Bierring, M.D., Des Moines

It is well that we should sometimes pause and take thought of our bearings. In our busy lives there is danger lest the future prove so alluring that all account of the past is forgotten. Perspective is essential in any walk of life. If we do not occasionally hark back into our yesterdays, we lose our sense of progress, and do not realize that our viewpoint has changed.

It seems fitting therefore, on this happy occasion of our Diamond Jubilee, to contemplate for the moment the course of events that have shaped the destiny of the Iowa State Medical Society from the days of the pioneer physician to this later period. Essentially it is but the story of human progress in this great prairie state, for the practice of medicine was ever close to the hearts and homes of the people.

Your speaker is under great obligation to that fine medical historian, Dr. David S. Fairchild, for the precious record he has left in the pages of our State Journal of the early history of medicine in Iowa.

There is also a deep sense of humility to speak, historically, in the presence of our distinguished first vice-president, the chairman of the evening, Dr. Frank C. Mehler of New London. A graduate of Rush Medical College in the class of 1863 —sixty-three years an Iowa practitioner—what a story of Iowa medicine he could unfold!

We are mindful that the vital elements of history are not always found in great events, but it is rather the commonplace and matters of personal incident that form the true index of human progress. The noblest purpose of history is to vitalize the past, yet it requires the imaginative genius of a Francis Parkman to make the historical personages live again on the written page.

In the words of Woodrow Wilson, historians should be as those who "see a distant country and a far-away people before their very eyes, as real, as full of life and hope and incident, as the day in which they themselves lived".

In a more humble way, we invoke your imagination for a brief period to live again in the spirit of the past, when men were men and doctors helped to make history in Iowa.

That uncultivated prairie which later was named Iowa, was first visited by the white man in the summer of 1673, two hundred and fifty-three years ago when two brave Frenchmen, the woodsman Louis Joliet, and the missionary Jacques Marquette, skirted the eastern shore of Iowa on their momentous voyage of discovery. During the century and a quarter that followed roving Indians traversed the prairies of the Iowa country. French adventurers passed up and down the Mississippi, and fur traders bartered for pelts with tribesmen along the Iowa streams.

With the Louisiana Purchase there was a revival of interest in the country west of the Mississippi. Parkman states that on July 18, 1804, the famous Lewis and Clark expedition sent by President Jefferson to explore the newly acquired territory of Louisiana, reached what is now the southwestern corner of Iowa. About a week later the party encamped near the present boundary of Mills and Pottawattamie counties. While in camp near the present site of Sioux City, Sergeant Charles Floyd died of acute intestinal disorder, the only death occurring during the entire expedition. The party consumed thirty-five days traversing the distance from the southwest corner of the present state to the mouth of the Big Sioux river.

As the fur trade developed, trading stations were established at various points, and as rivalry and disputes arose in which the Indians became more or less involved, it was necessary to establish government agencies and temporary military posts to which surgeons were sometimes assigned. Such a post was established in September, 1808, at a point on the Mississippi called Ft. Madison. The available records do not show that a surgeon was detailed to Ft. Madison, although among the provisions for the Fort was a

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surgeon's office. Early in September, 1812, a party of Sac Indians led by the Chief Black Hawk in British uniforms laid siege to the only American stronghold in Iowa. The brave little garrison resisted intermittent attacks for nearly a year, than set fire to the Fort one night and escaped down the river.

The discovery of lead in the vicinity of the future city of Dubuque, by the Indians, attracted the attention of white adventurers, and the large trading post nearby of Prairie du Chien, gave Dubuque a prominence as an objective point.

Seeking among the names of explorers, hunters and traders, we find this brief notice—"On August 11, 1817, Major Long and Doctor Lane ascended for some distance the DeMoyen river, then at a low stage". It is presumed that Doctor Lane was an army surgeon connected with an exploring expedition.

A little later we learn from an account written by Stephen Watts Kearney and Henry Schoolcraft, of a military expedition across northern Iowa in 1820—"that on visiting the Dubuque mines on the morning of August 5, Kearney stopped his six oared keel-boat at a settlement of traders, found Doctor Muir of the army with his squaw and two children, and that he and his men were treated politely by Dr. Muir and the traders". Further records state that Dr. Samuel C. Muir was a graduate of the University of Edinburgh, and a surgeon in the United States Army. Sometime before 1820 Doctor Muir married a girl of the Sac Nation, and about the date above mentioned he was stationed with a command at Ft. Edwards, now Warsaw, Illinois. Some years later an order was issued requiring officers of the army to abolish their Indian wives. Dr. Muir refused to comply with this order and resigned his commission. After leaving the army, Doctor Muir settled on a farm at the mouth of the Des Moines river where Keokuk now stands, and there he died in 1832 of cholera, leaving his Indian wife and five children in destitute circumstances.

Doctor Muir was the first white settler of Keokuk, which was then known as Pinck-e-chuttech.

Next in these early writings appears the name of Dr. Isaac Galland, who with his family settled on the west shore of the Mississippi in 1829, at a point called At-Wip-E-Tuck, afterwards known as Nashville. Doctor Galland hoped to build a city here, but Keokuk became too strong a competitor. It was here that the first white child was born in Iowa—his daughter, Eleanor, in 1830, and here also the first school was held. Dr. Galland was evidently a friend of Dr. Samuel C. Muir of Keokuk, and it is recorded that they worked together in all that pertained to their professional interests, besides laying out the city of Keokuk and naming most of its principal streets.

One of our past presidents, the late Dr. C. F. Wahrer of Ft. Madison, has left some interesting data regarding this versatile and picturesque character of Iowa pioneer physicians. It was said of him that he was a brilliant physician and was specially successful in the treatment of cholera, as well as the prevention of the epidemic. One of his contributions was a medicine chest or box about one foot cubic, on which was printed in red letters, "Dr. Isaac Galland's Family Medicines". This box contained the usual and ordinary remedies used by the doctors in those days, and was placed in nearly every cabin in his wide field of practice. This no doubt was very helpful as physicians and drugs were scarce. He evidently did not practice all of the time, but was engaged in many other pursuits. In 1836 he established the second newspaper published in Iowa called "The Western Adventure". Two years later the paper was sold and the name changed to "Madison Patriot". In the columns of this paper he left a description of the prairies and waters of Iowa, its animals, serpents, birds, plants and Indians, their life and habits, which showed him to be an able writer and historian. He also wrote a history of Iowa, made a map of Iowa, and in 1840 wrote a book "The Iowa Immigrant", now almost extinct.

For a time he lived across the river in Illinois, and while there was very active as a Mormon elder, being the private secretary of Prophet Joseph Smith in the Nauvoo settlement, but when Prophet Smith lost prestige and his growth waned in Nauvoo, Doctor Galland left the church. He practiced at various times in Nashville, now Galland, Montrose and Ft. Madison, where he died in 1858.

In this and in numerous other instances it will be seen that men educated as physicians had much to do with the development of the state. They brought with them the beginnings of general culture, and by reason of the cultivated power of observation, freedom from prejudice and superstition, and knowledge of the dangers surrounding the early settler, made the doctor peculiarly fitted to aid in the pioneer work of the settlement.

Probably the first real pioneer physician to locate in Iowa was Dr. Frederick Andros, who came to Dubuque in 1833 for the distinct pur-

pose of practicing medicine. He was a native of Massachusetts, a graduate from the literary department of Brown University in 1822, and from the medical department in 1826, coming to Dubuque seven years later.

In the year 1836 that part of the territory of Wisconsin comprising Iowa had an estimated population of 10,531, and Doctor Andros evidently had a clear field, enjoying practically all the practice. By reason of his appointment as surgeon for Indian agencies, he moved about a great deal with the Indians until 1854 when he located in Garnoville, Clayton county, and moved to McGregor in 1861.

The late Dr. Henry H. Clark of McGregor was associated with Doctor Andros during the ten years from 1870 to 1880, and in an address before the State Society in 1916, gave some interesting reminiscences of this first physician of Iowa. Doctor Andros was evidently far superior in intelligence and ability to the average physician of his day, but at the same time he was a typical frontiersman and something of a character. Dr. Clark related this story which will bear repeating—"I remember a country drive I took with him a short time after I came to McGregor. He drove a good horse, but he interfered so badly that either his right or left hind leg seemed to be in the air most of the time. As we were jolting over a rough road back in the Mississippi hills, the Doctor suddenly stopped his horse with the remark—'There's the damnedest nicest spring over there I ever saw'. We got out and walked over to where a fine stream of water gushed from the rocks and formed a pool about three feet in diameter and eighteen inches deep. The Doctor took off his high silk hat, which he always wore and in which he carried his letters, red bandanna, cigars, stethoscope, and always either a clean or dirty collar; pulled off his coat, rolled his sleeve to the elbow and thrust his hand to the bottom of the spring. After lifting aside a few stones, he pulled out a flask of whiskey, uncorked it, took a generous drink and then returned the bottle to the bottom of the spring for future use".

In 1880 when he was eighty years old he decided that Iowa was getting too civilized and tame, and went west "to grow up with the country". He practiced in Dakota for ten years, after which he changed his residence to Minneapolis where he died at the age of ninety-one years.

With 1833, when Doctor Andros came to Dubuque, the history of the practice of medicine in Iowa may be said to have had its beginning. Medical practice in Iowa in the early days of its settlement was neither attractive nor remunerative. From the very nature of their profession and its traditions, the fact of wealth and political advantage was the last of their ambitions, and for that reason few names of physicians who gained wealth or political distinction appear in the annals of Iowa history.

It is not possible to refer in detail to each of the physicians who participated in the development of the territory and later in the state of Iowa, so that our story must be confined to a few striking examples of pioneer Iowa physicians.

Another outstanding physician of this early period was Dr. James Moore Robertson of Scotch-English ancestry, who graduated from Jefferson Medical College of Philadelphia, in 1827. After practicing six years in Pennsylvania, and five years in Ohio, he came to Burlington, Iowa Territory, in 1838. After a few years practice in Burlington, he removed to Columbus City, which he helped to plat, and where he practiced his profession until 1870, when he moved to Muscatine where he continued to practice up to his retirement in 1874, after forty-seven years of extremely arduous service in his profession. He died in 1878.

While in Burlington and Columbus City, Doctor Robertson did a practice extending from Cedar Rapids to Keokuk, a distance of 150 miles, mostly on horseback with an expenditure of strength and energy, and with an endurance that can scarcely be appreciated by the practitioner of today. During the prevalence of malaria in the fall and pneumonia in the winter and spring, he was frequently almost continuously in the saddle, not infrequently traveling from sixty to seventy-five miles on a single trip.

Dr. Robertson also did much to help organize a new country, and to make treaties with the Indians whose language and customs were well known to both himself and his son William.

Dr. William S. Robertson the son, practiced in Columbus City and Muscatine, for a period of thirty years preceding his death in 1887. He was the first professor of medicine at the University of Iowa Medical School at Iowa City, and president of the State Society in 1873. The grandson, Dr. Charles M. Robertson, was a member of the faculty of the State University from 1894 to 1901, and is now a leading specialist and teacher in Chicago, thus constituting three generations of eminent physicians, of whom Iowa may well be proud.

One of the early Iowa practitioners that deserves special mention, is Dr. William Vogt, a native of Prussia, who came to Iowa City in

1848. His activities were limited entirely to his profession. For twenty-five years he was the most loved physician in Iowa City, and his memory was cherished for many years after his death in 1873, at the age of fifty-five years. It is said that he never presented a bill for medical services, but devoted himself to his patients and his practice without thought of money compensation. His modesty, his willingness to render service, his devotion, left a place never quite filled in the professional annals of Iowa City, which has been adorned by some of the finest men in the profession of medicine of Iowa.

It was a fine group of notable practitioners of medicine who located in Iowa before the year 1850. Very few came any farther west than Oskaloosa. Iowa appeared a fruitful field for the young practitioner with ambition to succeed in many ways. It thus happened that many pioneer settlements secured medical practitioners of a selected class, men of strength, courage and character. Success in those days meant a degree of personal sacrifice, courage and determination not ordinarily seen, and what success and reputation was finally secured was well earned. Doctors under these conditions became resourceful and self reliant, and were able to meet emergencies to a degree rarely seen today. There was little opportunity for contribution to medical science, and there seems to have been little disposition to record "interesting cases" or "personal experience", unless they were of real interest. Their work was rather of a silent influence, that contributed to the general betterment of a community and of which very little has been recorded. The name of the doctor often remains only as a tradition.

You may ask from whence came the Iowa pioneer physician of this period? In general, he represented the best blood of the eastern states together with a flavor of Britain and North Europe, which stamps our Iowa people with the essential qualities of the oldest stratum of the nation.

The graduates of medical schools came from the leading medical centers of this country. A few had the distinguishing mark of the University of Pennsylvania—the first medical school established in America; Harvard and Brown University as well as the University of Virginia, being represented to a limited extent. It is interesting to note the tendency to seek out and worship at the shrine of certain noted medical teachers of that period. The large number of graduates coming from the Ohio and Cincinnati Medical College indicated the influence of that early master of medicine, Dr. Daniel Drake. Again we observe the desire to follow the noted pathologist and surgeon, Dr. Samuel D. Gross, in his migration from Louisville, Kentucky, to Jefferson Medical College, Philadelphia. The great physician, Dr. Austin Flint, first at Louisville, then at Bellevue Hospital Medical College, left a similar stimulating impress on the early physicians of Iowa.

In 1850 nearly one-half of the physicians practicing in Iowa were not medical graduates. The men who had not attended a regular medical school were often not familiar with a code of ethics save one that would bring practical results. While these were disturbing elements, never-theless, a liberal spirit on the better part of the physicians led to the belief that society fellowship would inspire better feeling and to possible higher qualifications.

When the twenty-five Iowa pioneer practitioners of medicine met at Burlington, Iowa, in June, 1850, for the purpose of organizing a state medical society, it was in response to a firm belief in the minds of a few broad-minded physicians, with a view to the future, that organized medicine was the only means of progress, and towards higher educational standards, with greater benefits to the state and the people generally.

The inspiring genius of the memorable occasion, and father of the Iowa State Medical Society was Dr. John F. Sanford of Farmington, and later of Keokuk. He had attended a meeting of the American Medical Association in Boston in May, 1849, when an appeal was made for all states to organize state and county societies. This made such a profound impression upon Doctor Sanford, that on his return home he wrote many letters to physicians urging them to meet in Burlington the coming May for the purpose of organizing the Iowa State Medical Society. Feeling that sufficient interest would not be aroused by correspondence alone, he concluded to make a personal appeal, and went by stage to Keosauqua, Fairfield, Mt. Pleasant, Washington and Davenport, a distance of nearly 200 miles and then by steamer to Muscatine and Burlington, Ft. Madison and Keokuk, spending a day in each town, calling upon the physicians and urging their cooperation in this new movement. As a result twenty-five physicians gathered at the court room in Burlington, June 19, 1850, for the purpose of organizing a State Medical Society, Dr. John F. Sanford acting as temporary chairman and Dr. E. D. Ransom as temporary secretary. The minutes of this organization meeting, which fortunately have been preserved, state that Doctor

Sanford delivered an able and eloquent address on the objects contemplated by the convention, and referred to the advancement and achievements of medical science within the previous ten years. A committee was appointed to prepare and present to the convention a constitution which was reported later in the session, and after some amendments was adopted. The following officers were elected: Dr. Enos Lowe, Burlington, president; Dr. John D. Elbert, Keosauqua, first vice-president; Dr. D. L. McGugin, Keokuk, second vice-president; Dr. H. M. Mathews, Burlington, recording secretary; Dr. J. F. Sanford, Keokuk, corresponding secretary; Dr. G. R. Henry, Burlington, treasurer; Dr. John F. Dillon, Farmington, librarian.

The twenty-five physicians enrolled as charter members of the Iowa State Medical Society were as follows: Drs. Enos Lowe, G. R. Henry, Philip Harvey, E. D. Ransom, J. H. Rauch, J. W. Brookbank, H. M. Mathews of Burlington; John F. Sanford, J. C. Hughes, D. S. McGugin, E. R. Ford, Josiah Haines of Keokuk; N. Steele, J. Robinson, J. F. Moberry of Fairfield; John F. Dillon of Farmington; J. D. Elbert, J. E. Evans, James W. Flint of Keosauqua; J. J. Ellison of Wapello; E. G. Fountain of Davenport; J. H. Hershey and George Reeder of Muscatine; M. J. Morseman of Iowa City; W. H. Rosseau of Washington.

It was resolved that the first meeting of the Society be held at Fairfield, Jefferson county, on the first Wednesday in May, 1851. On the following day, June 20, 1850, the Burlington Tri-Weekly Telegraph, forerunner of the Hawkeye, referred to the organization meeting, in part, as follows: "The convention is eminently respectable in appearance, and anyone would see at a glance that it embraces among its members all the learning known to the profession, and the numerous and able speeches made by various members during the debates of yesterday evinced a high degree of talent. Indeed, taken as a whole, it is perhaps the most respectable convention which has ever assembled in our state. There are many gray beards among them, who while adding dignity and weight of character to the convention, also give tone and direction to the proceedings".

Seven of the organizers; Drs. Lowe, McGugin, Elbert, Reeder, Hughes, Rauch and Henry, were afterward elected president, and one of them, Dr. J. C. Hughes, occupied the chair twice. Dr. John F. Sanford, who did more to promote the organization of the Society than anyone else, acted as chairman during the organization meeting, and should have been considered the first president, being easily the outstanding man of the entire group.

At the first regular meeting of the Iowa State Medical Society in Fairfield in May, 1851, Doctor Sanford presented an interesting report on the "Causes which Contribute to Depress the Science and Dignity of the Medical Profession of Iowa". From this address we quote as follows: "Some of the most prolific causes of this unhappy condition in the profession are due to the want of preliminary education in those who have entered the profession. A better preliminary education on the part of our medical students will do more to improve and maintain the honor and dignity of the profession than any arbitrary exactions of medical colleges or society or proscriptive legislative enactment. The establishment of numerous literary institutions in Iowa will doubtless display its influence in the ranks of the profession". "The second cause which tends to lower the estimation of the profession in the minds of the public refers to the influence of ignorance among the profession themselves."

The extensive relation that medicine must ever maintain with other branches of knowledge deprives a physician who is ignorant of the general branches of natural science, of all those instrumentalities which are necessary to develop the resources of his profession, and it not only disqualifies him from adding to the existing stock of valuable facts, but excludes him also from participating in benefits of many of those brilliant truths, whose development has so greatly distinguished the modern cultivation of our art. Being thus deprived of the only means of attaining distinction in his profession, and uninspired by the lights that physical science throws around his path, he becomes indifferent to the progress and often to the honor of the profession. Our profession, as is known, stands pre-eminent for public virtue, probity and usefulness, yet the individual shortcomings of its members have often excited a popular and erroneous prejudice against it".

These words of Doctor Sanford spoken seventy-five years ago can apply with equal force to medical conditions of today.

Dr. Sanford was the prime mover in the organization of the College of Physicians and Surgeons of Keokuk, and the professor of surgery in that institution for four years. By reason of his high scholarship and general culture, he exerted an important influence in promoting higher standards of education and practice during this early period of Iowa medicine.

The founders of our State Society were distinctly among the medical leaders of their time. Whether as medical teachers or in the modest role of practitioners they all advanced the ideals of medical practice. When the dark days of the Civil War came to our land a decade later, they promptly responded to the call of duty. The greater number served as surgeons, and gained a special experience that contributed largely to medical progress in the period following the war.

Aside from Doctor Sanford, the other charter member who gained the greatest prominence during the succeeding decades was Dr. J. C. Hughes of Keokuk. He came to Keokuk just before the State Society was organized in 1850, and during his entire professional career of thirty years in Iowa was actively concerned with the development and growth of the College of Physicians and Surgeons of Keokuk. He began as demonstrator of anatomy in 1850, two years later was elected to the chair of anatomy, and the following year professor of surgery; from 1852 to 1881, the year of his death, he was the dean of the faculty. For its life and prominence, the medical school was largely indebted to Doctor Hughes. As a lecturer and teacher he had few superiors, and he gained wide fame as a skillful operator, being known particularly as a lithotomist.

In the State Society proceedings of 1871 appears a report of four successful operations for vesical calculus on the same patient. The four operations were performed during the years 1856, 1857, 1858 and 1860, from two to twelve calculi being removed at each operation. The patient at the time of the last operation being sixty-six years of age.

In the above report, Doctor Hughes made the statement that this was the only instance on record in which four successful operations for the removal of urinary calculi had been performed on the same patient, either in Europe or America.

During the War of 1861 to 1865 he was appointed surgeon general of the state by Governor Kirkwood. He organized and had charge of the army hospital at Keokuk, which was among the largest in the west, having as many as 2000 patients in the wards at one time. He was twice elected president of the State Society—in 1856 and 1865. Doctor Hughes, with Dr. W. F. Peck of Davenport, was one of the charter members of the American Surgical Association. He was a constant attendant at the State Society meetings, and his versatility of expression combined with his forceful character made him a strong opponent in debate. As the champion of the Keokuk Medical School, he was the frequent antagonist in later years, of that other prominent surgeon, Dr. W. F. Peck, dean of the Medical School at Iowa City, and their spirited discussions constituted one of the attractive features of State Medical meetings during those years.

It seems proper at this time to refer to another disinguished charter member, Dr. John Forest Dillon of Farmington, whose name is also connected with the earliest medical literature of Iowa. Through the courtesy of Dr. Frank M. Fuller of Keokuk, we were privileged to review Volume I of probably the only copy extant, of the first medical journal published in Iowa, "The Western Medico-Chirurgical Journal". The journal was published in Keokuk, the first number being issued September 1, 1850.

The first article in this first medical journal appearing west of the Mississippi is by Dr. J. F. Dillon on the subject "Rheumatic Carditis with Autopsical Examination". The article indicates extensive reading and familiarity with the pathological teachings of the Laennec school, and with other writers on diseases of the chest of the first half of the last century.

He concludes his article thus: "I have drawn up this hasty sketch of the case for two important reasons; in the first place, to present your readers with some additional testimony confirmatory of the frequent connection between arthritis and cardiac disease, and in the second place to illustrate the great benefit often derivable from necroscopic examination. The one is frequently overlooked, the other too sadly neglected."

This is particularly interesting when we recall that Doctor Dillon, at the time, was only twenty-two years of age, having graduated about a year before from the College of Physicians and Surgeons of the Upper Mississippi, located at Davenport. After a year's experience in practice at Farmington he found that he could not practice in this country without being able to ride on horseback, which he was utterly unable to do, so he gave it up and began the study of law in Davenport. After admission to the bar in 1852, he rose rapidly in his new profession. In 1858 he was elected judge of the district court, and four years later he was transferred to the supreme court of Iowa, becoming its chief justice. In 1869 he was appointed United States circuit judge, by President Grant. This office he resigned in 1879, to accept the professorship of law at Columbia University, New York City, as well as the position of general counsel of the Union Pacific Railway Company. Judge Dillon not only became one of the leading jurists of this country,

but was regarded as having one of the finest legal minds of his period.

It appears that most of the records of the early meetings of the State Society have been lost, but a roster of the officers elected each year has been preserved. The earlier meetings were probably all held in the eastern part of the state. In the transactions of the meeting in Davenport in 1867, President Dr. J. W. H. Baker states that this was the fourth meeting in Davenport.

During the Civil War years of 1862 and 1863 no meetings were held, and in 1864 a reorganization session was held in Iowa City at which Dr. M. B. Cochran, one of the leading physicians of the city, was elected to the presidency.

Beginning with 1867 the records of the proceedings of the State Medical Society are complete to the present time.

The seventeenth annual session which convened in Des Moines, February 5, 1968, marks another epoch in the history of our Society, because at that meeting fifty-eight years ago, the Iowa State Medical Society was incorporated as a corporate body.

At this session, which was the first time that the State Society met in Des Moines, a group of new names began to appear among the attending members, and while coming more from the middle and western parts of the state, they too, should be classed with the pioneers, for they blazed new trials and braved the same privations as their colleagues of an earlier day.

At this meeting in 1868, the brilliant Dr. William Watson of Dubuque presided, which no doubt added distinction to the occasion, because through his entire career of membership in the State Society from 1860 to 1907 he was recognized for his leadership and fine medical attainments.

We note familiar names among the signers of the articles of incorporation, Drs. Edw. Whinery of Ft. Madison, J. W. H. Baker of Davenport, S. B. Thrall of Ottumwa, A. G. Field and H. L. Whitman of Des Moines, the latter being the president of the Polk County Medical Society. The notarial seal was witnessed by Mr. F. M. Hubbell, notary public for Polk County.

All the actors of this notable occasion have passed from the stage, except Mr. F. M. Hubbell, who is still with us, as Iowa's leading capitalist and one of her most distinguished citizens. Dr. A. G. Field appeared for the last time before the Society in this very room four years ago, which was just fifty years after officiating as president of the State Society. At the time of the last meeting with us, he was ninety-three years of age.

The meeting in 1858 was held in Good Templer's Hall, and it is stated in the minutes that the attendance consisted of twenty permanent members and nineteen newly elected members, a total of thirty-nine members, in contrast to nearly nine hundred registered at this diamond jubilee meeting fifty-eight years later.

At the close of the session the following two interesting resolutions were adopted.

1. "Resolved, that a vote of thanks be tendered to the Western Stage Company and also the various railroad companies of the state that have promoted the interest of the meeting by a reduction of the usual rates of fare".

2. "Resolved, that while our thanks are due to the members of the Polk County Medical Society for the provision of our entertainment on the occasion of this our first meeting in the City of Des Moines, yet as we are to continue meeting annually at this city, and as the tendency to an unnecessary expenditure of money and to consume time too valuable to be thus enjoyed, we advise them to refrain from such preparations or entertainment in the future".

The organization of county societies kept pace with the growth and progress of the State Society. The first society so designated was the Polk County Medical Society which was organized October 24, 1851, so that it also will be entitled to a diamond jubilee celebration in the near future. The Keokuk Medical Society was organized October 3, 1850, but the Society was limited to Keokuk city, and did not include Lee county, but it is fair to assume, however, that this was the nucleus of a county society.

Louisa County Medical Society was organized in 1852, Wapello county in 1853, Johnson county in 1855, Scott and Mahaska county in 1856, and others followed in rapid succession, so that by 1905, when the new organization plan, based on the county society being the unit in state and American medical representation, was generally adopted, there were only six counties remaining in Iowa in which a county society had not been organized.

The influence of our State Society upon the progress and development of medical schools and education would form a theme by itself. It is interesting to note the intimate relation of the work of the Society to the progress of medical education, throughout its entire existence.

The establishment of medical schools in Iowa corresponds with the society organization of the profession. The College of Physicians and Sur-

geons of Keokuk was originally organized at La-Porte, Indiana, in 1846. In 1847 this school was moved to Madison, Wisconsin, and became the medical department of the University of Wisconsin. The school then migrated to Rock Island in 1848, to become the college of Physicians and Surgeons of the Upper Mississippi. In 1849 it moved over to Davenport for one year. Then in 1850 it came to Keokuk and began there its first session in November, 1850, where it remained for a period of fifty-eight years.

In reviewing a copy of the annual announcement for the session in 1851-2 of the "College of Physicians of the Iowa State University, located in the city of Keokuk, Iowa", it is noted that the school is referred to as the medical department of the Iowa State University.

This designation was retained until 1870, when the medical school established at Iowa City, claimed the right to this title by reason of the constitutional provision that all the departments of the University should be located at Iowa City.

The medical department of the State University of Iowa, instituted its first course of lectures at Iowa City in October, 1870.

The first session of the Drake University Medical School opened in Des Moines in October, 1882, and the Sioux City Medical College began its first session in 1887.

By the gradual evolutionary process of discontinuance and merger, the Keokuk Medical Schools, Sioux City Medical College, and Drake University Medical School, have been centered since 1913 in one institution, the College of Medicine of the University of Iowa, at Iowa City, which is now universally recognized for its leadership in the field of medical education.

If we compare these pioneer Iowa schools with those of the present, they may appear at a disadvantage. Yet in their day they ranked with the best, and fulfilled their purpose as well as any similar institutions in the country. The teachers possessed as good an education as was afforded at the time in America, and some had the advantages of European study. What they may have lacked in laboratory and general equipment, they made up in enthusiasm and energy. Above all they imparted character to students and graduates, which is not always attained by the teaching institutions of this later day.

In the words of Osler: "The great possession of any university is its great names. It is not the pride, pomp and circumstance of any institution which brings honor, not its wealth, not its halls, but the men who have trodden in its service the thorny road through toil even through hate, to the abode of fame, climbing like stars to their appointed heights".

The last quarter of the nineteenth century will always be regarded as the golden age of medical achievement. That our Iowa physicians caught the spirit of the time, glimpsed the possibilities opened up by the new discoveries of the period, and inspired the oncoming medical student and practitioners, entitles them to our highest admiration.

This theme can not be brought to a close, incomplete as it is, without passing in brief review, a few of the stalwart figures who have left their impress mainly upon the present generation of active practitioners of Iowa.

The dominating personality at this particular period in Iowa medicine, was undoubtedly Dr. W. F. Peck of Davenport. He seemed born to leadership. Aside from his rare professional talents he was endowed with a wonderful personal magnetism, as well as an indefatigable energy, and possessed with a perfect "abandon" in espousing any cause in which he was enlisted. It is easy, therefore, to understand that he should gather about him, a strong coterie of warm personal friends, many with great influence in the affairs of state, who were devoted to him heart and soul in any work that he would undertake.

He was one of the founders of the medical school at Iowa City and elected its first dean and professor of surgery when only twenty-eight years of age.

The State Medical Society honored him with the presidency at the age of thirty-six years, the youngest in its history.

Dr. Peck was known as a brilliant surgeon, being a charter member of the American Surgical Association and for many years the chief surgeon of the Rock Island Railway System.

By reason of his clear and convincing address, his lectures were intensely interesting, and he left a profound impress on the surgical teachings of his period. Although he evidently ruled his school with a firm hand, the older graduates remember him with affection and pride, as the foremost spirit in the medical profession of Iowa, of his generation.

The later students of the Keokuk Medical College cherish the memory of Dr. Thomas J. Maxwell, the surgeon, and Dr. George F. Jenkins, the physician. Each was eminent in his chosen field. Both were excellent teachers and contributed extensively to the medical literature of Iowa. Their idealism inspired a group of graduates who added honor to the Iowa profession.

Along our western border a sturdy Scotchman, Dr. Donald Macrae of Council Bluffs, a graduate of the University of Edinburgh, advanced the standards of medicine throughout a long and successful career. He exemplified the sterling qualities of his race, and no personal advantage would ever permit him to swerve from the lines of right and justice in relation to professional or civic duties. A distinguished son follows in his footsteps and the two generations of Donald Macrae furnish the unique example in that each was honored with election to the presidency of the Iowa State Medical Society.

As a teacher and practitioner, no one had greater influence in medical circles than Dr. Lawrence W. Littig of Iowa City. His activities in medical society organizations was unequaled. Forty years ago he came to Iowa as a medical teacher, after a rather long course of post-graduate study in the best laboratories and hospitals of the old world, bringing the flavor of recent personal contact with such leaders of medical thought as Pasteur, Lister, Charcot, Virchow, Koch and Billroth. He brought the first oil immersion lens into Iowa; he was also the first to use the centrifuge and the stomach tube, as well as to introduce chemical and microscopic examinations of secretions, excretions, and exudates for clinical diagnostic purpose. He instilled the spirit of scientific inquiry, and the desire on the part of student and graduate for the broadening influence of medical travel, a wider range of reading, and a more comprehensive view of the study of medicine.

Dr. Littig was entirely responsible for the establishment of separate departments of pathology and physiological chemistry at a time, when only a limited number of the leading medical schools had taken this step.

His address as President of the State Society at the Burlington meeting in 1912 was published in full in the Journal of the American Medical Association by special request of the editor, because of its advanced thought on medical education, hospital standards and medical practice.

It is but a year since our beloved Dr. James Taggart Priestley of Des Moines was with us here in annual session. Fifty years of medical service has enshrined the name of Priestley in the hearts of this community. As a teacher, practitioner and consultant he embodied the best traditions of our guild, and deserves for all times an honored place in the annals of Iowa medicine. He too gave a distinguished son to the Iowa profession, and in the near future two grandsons, Joseph Biddle Priestley and James Taggart Priestley II, will enter upon professional work in Des Moines, and thus carry on the Priestley traditions in Iowa.

Iowa medicine furnishes a host of leaders who dignified the practice of medicine, and compare well with the cultured clinician of this later day.

Our thoughts revert to men like Doctors D. C. Brockman of Ottumwa, J. M. Emmert of Atlantic, R. E. Conniff of Sioux City, A. L. Wright of Carroll, D. W. Crouse of Waterloo, Gershom H. Hill of Independence, later of Des Moines, E. W. Clark of Grinnell, Amos Babcock of New Hampton, W. S. Grimes of Wapello, A. W. McClure of Mt. Pleasant, Dr. A. W. Cantwell of Davenport, A. B. Bowen of Maquoketa, and many others.

The closing words are spoken in reverent memory of one of the most delightful physicians that Iowa medicine has produced, Dr. William Drummond Middleton of Davenport. For thirty-two years he was one of the inspiring teachers at Iowa City, having taught in three subjects, physiology, medicine and surgery, and seemed perfectly at home in each. No words can do justice to the charm of his personality, his scholarly address and nobility of character. His keen sense of humor, ready wit and joyous ways gave pleasure to those about him.

In his presidential address of thirty-five years ago, he presented a discussion of the microbic origin of disease, that would be a contribution to the medical thought of today.

It is not too much to say, that Middleton was an inspiration to a generation of students, in which the potent factor was that silent influence of character on character, so well expressed in the words "the touch divine of noble natures gone", or in the lines—

> "Whatever way my days decline
> I felt and feel, tho' left alone,
> His being working in mine own,
> The footsteps of his life in mine."

Such in part is the professional heritage we enjoy today—a record of achievement of which Iowa medicine may well be proud. May it continue to be our inspiration and like a morning star, brighten the pathway for the medical progress of tomorrow and the years beyond.

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CLINICAL SIGNIFICANCE OF HYPERGLYCEMIA IN ARTHRITIS DEFORMANS*

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In recent years attempts have been made to establish arthritis deformans as a disease due to metabolic derangement, and to treat it by means of diets low in carbohydrate. The purpose of this paper is to present the results which we have obtained in a series of metabolic studies in arthritic patients, and to correlate them with a review of the findings of others. This has been done in order to clarify the interpretation of the blood sugar values which these patients exhibit.

The majority of cases of arthritis deformans are characterized by an exaggerated blood sugar response after the ingestion of carbohydrate. The blood sugar concentration rises to higher values, and the return to a normal level is delayed longer than is seen in a normal individual.

Because of the similarity of this response to that seen in association with diabetes mellitus, it has been accepted as evidence that arthritis deformans is accompanied by a diminished ability to metabolize carbohydrate. Some have ascribed the arthritic syndrome to this metabolic deficiency.

With this as a basis, the use of low carbohydrate diets in arthritis has been recommended, and has become popularized in the treatment of this condition. When we analyze the types of such diets which have been used in this connection, there is much lack in uniformity. Many which ostensibly are low carbohydrate diets are really quite high in their content of sugar-forming foods; others are essentially low-calorie diets. In some instances, the menus employed have been markedly deficient in vitamines and mineral salts. The danger associated with the use of such a restricted diet for a considerable period of time seems obvious.

If restriction of diet is to be practiced in these patients, its rationale should be thoroughly established. If employed, it should be with the purpose of either causing a return of normal blood sugar values, or else alleviating the arthritic condition. If it fails in the accomplishment of one or both of these objects, then the indications for its use have not been established. We believe that from this viewpoint, clinical reports and experimental studies fail to justify such dietary restriction.

An analysis of case reports of those who have employed low carbohydrate diets in the treatment of their patients reveals a marked lack of unanimity of opinion as to the benefits which have resulted. Some who have administered carefully constructed diets report no benefit. In many cases where improvement has been reported, it is hard to rule out the part played by the spontaneous remissions which characterize arthritis deformans, or the effect of other dietary and hygienic changes which occurred coincident with the reduction of the carbohydrate intake.

The therapeutic efficacy of low carbohydrate diet in the treatment of arthritis deformans has not been established. This is in agreement with our metabolic studies, which indicate that the blood sugar values are not appreciably altered by varying the amount of carbohydrate intake.

Our data confirm the observations of others that the resting or post-absorptive blood sugar concentration of these patients is higher than normal, and that their response after ingestion of sugar-forming food is distinctly higher than in non-arthritic controls. This would seem to indicate that these patients have a lowered capacity for sugar utilization. But when the response of a patient to varying amounts of glucose was compared, the characteristic abnormal curve was obtained, regardless of the amount ingested. Similar results were obtained when mixed meals of varying carbohydrate content were used in place of glucose. The response of one patient to 100 grams of glucose following three weeks of high carbohydrate diet was found to be no greater than that produced in the same patient by

*Read before the Medical Society of the Missouri Valley, Omaha, Nebraska, September, 1926.

25 grams following six months of low carbohydrate intake.

It is hard to explain these experimental results, if we must assume that the abnormal blood sugar values are the results of diminished ability to utilize carbohydrates. In this connection, it is worthy of note that diabetes mellitus and arthritis deformans may exist concurrently, and that adequate control of the diabetic condition by proper metabolic regulation does not alleviate the arthritic symptoms.

These observations emphasize the fact that high blood sugar concentrations may arise from other causes than from metabolic deficiency. Such values have been described in association with many diverse conditions, which apparently act through different mechanisms. Fatigue, asphyxia, anesthesia, partial or complete deprivation of food, general or local infection, endocrine imbalance, muscle dystrophy,—any of these, or other causes might produce a similar picture. In correlating these with physiological processes, it is apparent that pathological blood sugar responses may arise due to interference in transport, oxidation, elimination or storage of metabolites. This might involve the integrity of the sugar-burning mechanism, as in diabetes mellitus, or might instead be due to disturbance of the circulatory system, cell permeability, volume of active metabolic tissue, endocrine imbalance, or other factors.

Recognizing these facts, it would not seem logical to assume that they could be corrected by limiting the carbohydrate intake, nor would such a form of therapy seem justifiable without further foundation. The blood sugar concentrations which these patients manifest probably signify that a new equilibrium has been established as a result of the trophic changes associated with the arthritis, and it might be as unwise to attempt to change it as it would be to readjust the carbon dioxide content of the blood of a mountaineer so that it would correspond with that of a plainsman.

Recent articles on arthritis have directed attention to the significance of these trophic changes in association with the alteration of blood chemistry. Pemberton and his co-workers have noted accentuation of the blood sugar alterations in association with maintenance of fixed posture. This they have ascribed to circulatory stasis. It is possible that muscular inactivity may also be a factor in their experiments. This is supported by the observation that muscular exercise increases the utilization of glucose in diabetic patients. It receives further confirmation from the work of Burn and Dale, who have found that when glucose and insulin are injected simultaneously into the circulation of an animal, the former disappears from the blood stream as rapidly after severing the connections with the central nervous system, removal of endocrine glands and all abdominal organs, as it does in the intact animal.

In conclusion, we feel that the facts at hand do not indicate that arthritic patients have a lowered capacity for carbohydrates, but rather that their trophic changes have brought about a readjustment of their mechanism for sugar-handling. In the absence of evidence to the contrary, we do not feel that carbohydrate limitation in these patients is a rational form of therapy even though it has been advised and is extensively employed.

THE DIAGNOSIS OF EARLY TUBERCULOUS LARYNGITIS*

Sidney Hands, M.D., F.A.C.S., Davenport

Tubercular laryngitis is never a pathological entity. Twenty-five per cent or more, of adult pulmonary tuberculosis is accompanied by definite tuberculous lesions of the larynx, but 100 per cent of laryngeal tuberculosis has a concomitant tuberculous condition in other parts of the body, the greater per cent, if not all, of such lesions, being in the lungs. Tuberculous structural changes, both healed and active, have been found in the larynx, postmortem, which, in life, produced no symptoms whatever. This condition has been found especially true in children.

The diagnosis of beginning tuberculosis of the larynx is comparatively easy. Hence, such a possibility is a great aid in establishing a diagnosis of a pulmonary disease of like character.

A suggestive symptom is a slight, but persistent huskiness of the voice, usually in the morning, which may be relieved for the day by coughing or clearing the throat. The huskiness may be displaced by an indefinite discomfort referable to the throat, or even a slight pain on swallowing. Sometimes the huskiness of the voice returns as the patient becomes tired, but the striking feature is the persistence of this symptom.

With a laryngeal mirror, a pale or anemic color of larynx, associated with a mild laryngeal catarrh, a definite weakness of the laryngeal muscles, causing a weak or toneless voice, is suspicious. Whatever lesion is found, the asymmetry of the picture is the outstanding characteristic of tuberculous laryngitis.

*Presented before joint meeting of Scott and Rock Island County Societies, April 6, 1926.

As the tuberculous condition develops, there may be a slight hoarseness throughout the day, especially when the voice is used a great deal. Solenberger found the following are all important signs in the early stage of tuberculous laryngitis:

Mere weakening of the voice:
Vocal fatigue:
Hoarseness:
A sense of dryness in throat:
Troublesome localized tickling on swallowing:
Pain in swallowing:
A feeling of lanquor or debility, with increasing cough.
A constantly recurring acute laryngitis is always suspicious.

Tuberculous manifestations in the larynx are of four main types:

1. Infiltration.
2. Tuberculoma.
3. Ulceration—(a) Acute or active; (b) Chronic, or sluggish; (c) Superficial; (d) Deep.
4. Edema.

Infiltration is one of the very earliest signs and is localized in the following places in the order of its frequency:

1. Posterior laryngeal wall:
2. Interarytenoid sulcus:
3. Arytenoid cartilages.

Then less frequently follow the epiglottis and the ventricular bands.

The infiltration of the tissues is usually slow, and the mucosa has a thickened, smooth and stretched-out appearance. Probably many cases of tuberculous laryngitis recover spontaneously, without a suspicion on the part of the patient as to the true state of affairs.

Tuberculoma is a local tissue reaction to the action of the tubercular bacillus.

Ulcerations are quite small in the beginning. They are irregular in outline and "mouse-nibbled" in appearance and covered with a serous or sero-purulent exudate. There is no hyperemic areola to the lesion, which serves as a valuable differential point in considering other forms of ulceration. A deep punched-out ulcer suggests syphilis, which may coexist with a tuberculous laryngitis.

Ulcerations of the larynx are most frequently found in the following order:

1. Epiglottis:
2. Ventricular bands:
3. Aryepiglottic folds:
4. True cords:
5. Interarytenoid sulcus:
6. Arytenoids:
7. Posterior laryngeal wall.

The mechanism of infiltration and ulceration is explained thus: The tubercle, by direct pressure, interferes with the blood supply to the surface, and in turn produces a superficial necrosis. This devitalized tissue in turn, is readily attacked by a mixed infection, and the surface breaks down into a definite ulceration. The very acute tuberculous ulcerations are more painful than the sluggish type.

Edema is apt to be a late manifestation, and indicates that pressure interferes with the lymph and blood streams. This produces edema, and with it, anemia, causing the so-called "gray infiltration". An early characteristic, also, is when the larynx is colored a dark red, quite generalized, with a velvety appearance of the mucosa, and a slight pink tinge to the vocal cords. At this time, particular attention to the mucosa on the posterior laryngeal wall, will usually reveal a thickening, when the same area is compared to the normal parts of the lining membrane. If the findings are overshadowed by symptoms of a chronic laryngitis, with cough, repeated examinations may be necessary.

There is no doubt of the diagnosis when infiltation on posterior laryngeal wall increases to any more than a slight thickening. That first sign is explained by the fact that, during sleep, the sputum usually remains in contact with the posterior wall, but the larynx is kept free during waking hours, by cough and expectoration.

If this infiltration is carried a step farther, the arytenoid cartilages are involved by direct extension and produce the "club-shaped" arytenoids, which are so easily identified. These club-shaped structures are pathognomonic of tuberculosis if syphilis is excluded. This enormous thickening of the arytenoid area, obliterates to a more or less extent, the inter-arytenoid sulcus and is a very valuable early sign of tubercular infection.

If infiltration of the posterior wall is slow, the mucosa is dark red. If rapid, the "ashen gray" appearance is noted, due to strangulation of the blood supply.

Be on the lookout for small pyramidal swellings, which project into the lumen of the larynx from the posterior laryngeal wall, even before there is any swelling of this area to attract attention. These small bodies may have the typical "mouse-bitten" apices and covered with a mucopus. These bodies may be found also on the arytenoid cartilages and on the posterior surface of the epiglottis. They vary in size.

Another valuable sign is an infiltration at the base of the epiglottis, which, although less fre-

quently involved than the posterior laryngeal wall, is nevertheless, often found, and is characteristic of a tubercular process.

When difficulty arises in differentiation between tuberculosis and syphilis of the larynx, remember that the tubercular ulcer is shallow, covered with a thin serous secretion, has a "mouse-bitten" edge and has no inflammatory areola. Syphilitic ulcerations are deep, covered with a thick greenish secretion, has a regular "punched out" margin and surrounded by a distinct halo of inflammatory reaction. Tubercular ulcerations heal with little or no scar formation, while luetic lesions are replaced with a great deal of cicatricial contraction to mark the site of the original diseased area.

When we take into consideration that every case of tuberculous laryngitis in all probability has a coexisting tuberculous lesion in the pulmonary tissue, as the primary focus, then the existence of the laryngeal pathology in itself, serves as an indication that the prognosis, in general, is not so favorable, as where no laryngeal disorder exists. This is considering the time element alone, a most important item as regards therapeutics.

Formerly a diagnosis of tuberculous laryngitis was regarded as a death sentence, but it is of no such extreme import at present under proper restraint. However, the mortality of tuberculous laryngitis is still twice that of the purely pulmonary type of the disease. In a certain series reported by an English institution, 70 per cent of those suffering from tuberculous laryngitis, succumbed, but 25 per cent of the survivors had perfectly sound larynges. Certainly these figures can be improved upon in our sanitariums, of the west particularly, where climatic conditions are incomparably better than those of England.

Tuberculosis is most frequent between the ages of twenty and forty-five, or at the period of the greatest economic usefulness. It is the most common and the most deadly scourge of humanity. In England and Wales, fifty-three thousand succumb annually to this disease. It is the greatest single cause of disablement in life.

Therefore, I wish to make this plea to the medical men who are out on the firing line doing general work. Learn to use the laryngeal mirror. The technique is simple and the cost of the equipment nominal. The thrill which you will experience in detecting but one case of tuberculous laryngeal disease, will repay you many fold for the extra effort involved and this valuable addition to your diagnostic maneuvers, will enable you to institute proper therapeutic measures earlier in this dread disease, and thus save many valuable lives.

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MERCY'S DOMAIN

Within its portals so peaceful and white,
There echoes its spirit, by day and by night.
The Hospital, 'tis Mercy's Recruit for the world,
Where suffering humanity's ills are unfurled.
Where no one denies,
The sufferer's cries,
And all scientific aid at each patient is hurled.

Like a haven of hope to the weary sick,
Its all efficient system which runs to a tick,
Soon banishes pain and recuperates life,
Discharging majorities again out for the strife.
'Tis only the emergency call,
That allows the regularity to fall,
In the mad race for its victim at the point of the knife.

Its staff is so noble, so humanely divine,
The doctors and nurses, who grace it so fine,
Imbued with such skill, such soul and spirit,
That no sufferer, knowing failure, should here fear it,
But trust to their efforts,
Until care and aid converts,
Their mouldering clay to a new living spirit.

Here come those, who are maimed or punished with disease,
Whether by accident or heredity's tease,
Look for the ignorant or victims who willed
To misuse their bodies until their doom was sealed,
Who have since craved to learn
Their normal health to earn
And to the Hospital's army of soldiers appealed.

Then there is the side of Life's greatest blessing,
Crowned mothers with newly born babes, here convalescing.
After suffering nature's way of a mother's pain,
They are relieved, cheerful, and happily smiling again.
With a new little soul,
A new life to control,
As they fondle their babes and new health regain.

And here is the humor of this great institution,
To which inmates and nurses all give contribution,

And young internes develop the regular feat,
Of searching between hours for something to eat.
But they'll help a nurse along,
While hanging on to some man's tongue,
For fear, ether will make him swallow it way down to his feet.

The little probationers so new at their duties,
Are timid, uncertain, though real little beauties,
In trying so hard to follow all rules,
Apply ice bags to hot stoops and wonder why it cools.
While other nurses hunt ice cream,
These beginners will day dream
Hoping to emerge specials from the hospital schools.

The final chapter also, the hospital tells,
Where sadness and grief all laughter quells,
Which defies skilled aid, doctors, medics and nurse,
When a doomed one's lot becomes perverse,
And grim Death calls,
In the hospital halls.
'Tis God's own command that to His realm we disperse.

—Mrs. Miriam G. Slobin.

PUBLIC HEALTH NOTES

HENRY ALBERT, M.D.
Commissioner, State Department of Health, Des Moines

I am pleased to accept the invitation to contribute, each month, a page on some of the public health activities of the state.

I want to take this opportunity of acknowledging the kindly reference and welcome in last month's copy of the Journal. After a sojourn of a few years in the West, I am greatly pleased to be back in my native state and where I spent about twenty years of my professional life.

I have accepted the position of commissioner of the state department of health which was tendered me several months ago, with the assurance of many friends that the medical profession of Iowa, is in earnest in desiring to see a strong state department of health. I trust that this is a general desire, for the department needs the loyal support of the profession, not only in aiding it to secure more substantial financial support, but also in extending its scope of service.

The department of health must be essentially regarded as belonging to the medical profession. The profession expects the department to initiate a program of activities directed at the prevention of disease and to carry it out in a progressive and aggressive manner. To make its work a success however, this department of health must carry on much of its work through the medium and with the aid of organizations other than the medical profession.

The department welcomes the opportunity to serve the state through the medical profession. It welcomes constructive criticism of its policies and work as well as suggestions for their improvement. If the time should come when there are indications that the department is ceasing to have the confidence of the medical profession or the work and policies of the department are not meeting with the approval of a large majority of the medical profession, the present commissioner will gladly yield his position to some one else.

All of this sounds rather needless, but it is very important. The state department of health, either through lack of virility or because of an unusual degree of modesty has not, in the way some other departments have, impressed itself upon the public mind, and this has militated against both its place of leadership and its financial support. That the Iowa department has not stamped itself on the minds of the people, is attested by the comparatively small appropriations made for its maintenance. As a matter of fact, Iowa stands next to the bottom of the list of all the states of the Union in the per capita support which the department receives. The average per capita appropriation to the state department of health of forty-eight states of the Union is 10¼ cents. That of Iowa is only 3 cents. More shall be said about this subject a little later since we desire the profession to become acquainted with all the facts and it is hoped and expected that the profession will lend its aid in an effort to build up its department of health.

At the present time, one of the major projects to which the state department of health is giving prominence, is a campaign of diphtheria abolition—by the use of toxin-antitoxin (T. A. T.).

Every physician has had mailed to him from this department, a copy of Health News Letter No. 19, which indicates that our program in Iowa is part of a general program throughout America. Iowa is well to the forefront in this crusade as fifty-five communities have already successfully carried out the program of immunization, and at this time (October 30th), twenty different communities are arranging for it. In New York 400,000 school pupils have been immunized, but proportionately Sioux City, Iowa, can beat that record, as in the latter city 18,000 have been immunized, which means about 90 per cent of the school population.

The value of the administration of the T. A. T. as a preventive against diphtheria is beyond question. The risk of untoward results, even among

infants, is negligible. As Dr. W. H. Park of New York says, "What I want you all to believe is that toxin-antitoxin is in little children a harmless preventive against diphtheria. We gave each of 2000 infants, when three days old, a full man's dose without the slightest harm".

The medical profession can aid this campaign by encouraging the people to adopt it and by cooperating with them in carrying it through.

It is not the policy of this department to take any part in the actual administration of the T. A. T. The local physicians are in the locality to serve the people and it is the desire of this department to encourage the use by each locality of the medical services there available.

The state department will aid by supplying without charge, literature and sufficient T. A. T. to immunize 200 children. These treatments can be used to start the program, by using it for the kindergarten pupils, the first graders, or for those who cannot afford to pay for the material.

Different methods of administration have been used in different places, but where large numbers of school children are to be immunized, the most expeditious method is to have a day and hour set for the inoculation and then have the pupils file into a room or part of the school building, where, with the aid of nurses and teachers, physicians can inject the 1 c.c. of toxin-antitoxin subcutaneously in a jiffy, and thus handle a great number of pupils in a short time. This conserves the time of both school and physician.

It has been found that this initiatory work through the schools has been the beginning of a more extended program. For, through the educational effect of this campaign, many preschool children and out of school persons are being taken to or going to their local physicians for immunization; so with a new group being born into the world each year, we are only at the beginning of the program.

Should any physician be timid about using the toxin-antitoxin through fear of reactions due to hypersensibility, let him refer to Dr. Ed. L. Bauer's article on the subject in dealing with 150,000 children in Philadelphia. The article appears in the American Medical Association Journal, March 27, 1926.

LICENSES REVOKED

According to the Federation Bulletin, physicians' licenses to the number of eight-one and druggists' licenses to the number of fifteen have been revoked for liquor violations.

BISMUTH THERAPY IN SYPHILIS

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(With the consent of the author, we are permitted to republish considerable portions of a paper of great interest to those engaged in the treatment of syphilis. After a careful reading we found that less than a free printing of the historical references would fail to present to the reader a clear idea of the author's view—Editor.)

It was the discovery of the spirocheta pallida by Schaudinn and Hoffmann in 1905, and its establishment as a causative agent of syphilis which stimulated the interest of scientists to search for new methods and means of treating the disease specifically. Before this time, and until comparatively recent years, while many drugs were employed in the attempt to attack syphilis, beginning with the primitive herbs and plants like guaiacum wood and the ancient lobelia syphilitica, only two drugs used were at all efficacious. These were mercury and iodine.

Mercury, as we all know, had its place in the treatment of syphilis even before it was recognized as a distinct disease, only because its good effects on skin lesions had been observed. It is needless to speak of the important role which mercury has played in the fight against syphilis from the time of the great Arabian physicians who used it by inunction, through the various pills suppositories and vapor inhalation stages, to the present day when it is used mainly by inunction and by injection.

Iodine, introduced by Williams and Wallace in 1830 as an anti-syphilitic and antidote to mercury, assumed more or less importance, since it was observed that the protean manifestations of the infection disappeared under its use.

Mercury affects the microorganisms mainly in an indirect way by stimulating the body cells to combat their activities. And, if the theory of MacDonough is to be accepted, its chief action is to split up the colloidal protein particles which form a resisting substance and spread them over a larger area, making a greater protective surface, being specific only in that in syphilis there is more protein matter to be broken up. Mercury is only slightly spirocheticidal.

Iodine does not affect the microorganism. It has, rather, a solvent effect upon the abnormal tissues produced by them.

We are familiar with the fact that arsenic, just as mercury, had its advocates even in the time of Paracelsus, but it was not until the epoch-making discovery of Ehrlich in 1909, who successfully

established his theory of chemotherapy—that is, the chemical relationship between drug and parasite—that we had the first drug which destroyed the spirochetes and produced only a minimum of tissue damage.

Since the introduction of salvarsan and its cogenitors, neosalvarsan, silver-salvarsan and sulp-salvarsan, other chemicals, like vanadium, copper and antimony have been tried for the specific treatment of syphilis, but none gave the desired effect. However, experimentation with the heavy metal bismuth proved that it was a valauble addition to the armamentarium of drugs for combating the ravages of the spirochetes. It has a decided spirocheticidal effect without disturbing the immunological powers of the body cells.

The original work with bismuth in the treatment of syphilis was performed by Balzer, a Frenchman, in 1899, but he abandoned its use after experimenting on dogs, because of the apparent toxic effect which it produced. From his time nothing more was heard about it until 1912 when at the French Dermatological Congress in Paris, several reports were read upon the important therapeutic value of bismuth in the treatment of syphilis. The work was taken up by Sazerac and Levaditi, the two men who did most to promote the use of this drug as an antisyphilitic remedy, and in 1920, after almost a decade of experimentation, they confirmed the work of Sauton and Robert on the bismuth treatment of spirillosis in fowls. Following these trials, they made repeated and successful experiments on animals and man and so gave an impetus to bismuth therapy which has already been far-reaching in its consequences. Later, in July, 1922, in a paper published in *La Presse Medicale,* Levaditi confirmed the reports of Fournier and Guenot, both of whom made considerable contributions in this field, on the favorable effect of bismuth on the Wassermann test; and, in 1923, Levaditi published his conclusions concerning bismuth therapy, stating that it achieves rapid cicatrization of syphilitic lesions in all stages of the disease; that it cures syphilis; that it is at least equal from a therapeutic point of view to arsenical preparations; that it is far better than mercurial drugs and, that it is a valuable antisyphilitic remedy for those manifestations of the disease which resist the action of arsenic and mercury. These were, of course, startling statements to make about a new drug, but experiments made abroad and in this country have substantiated many of the results obtained by Levaditi, although we do not yet feel that it is equivalent to arsenic.

The bismuth preparation first used by Levaditi was in the form of an oily suspension of sodium and potassium tartrobismuthate known as trepol, but it was found to be too painful and was replaced by neotrepol. This is a preparation perfected by Levaditi and Sazerac, consisting of 95 per cent suspension of bismuth tartrate in a sterile isotonic solution. Other compounds of bismuth, soluble and insoluble, like iodobismuthate in quinine, luatol, and potassium tartromismuthate with butyn were subsequently introduced—in fact, several hundred preparations have been tried, and today there are about fifty different kinds on the market. My experience has been limited almost exclusive to neo-trepol and to some extent to bismogenol. Bismogenol is a bismuth oxybenzoic acid compound which is soluble in water and ordinary organic solvents.

Bismuth is eliminated in the urine, feces, bile, saliva and sweat, and if this elimination is not carried out properly by the kidneys and liver, we may get the clinical symptoms of intoxication such as stomatitis, gingivitis, gastroenteritis, kidney irritations, nephritis, dermatitis, emaciation and exhaustion leading sometimes to death. However, in my experience the patient has, as a rule, shown nothing more than the mouth symptoms, like the bluish-black gum line, due to a deposit of the reduced bismuth sulphide on the mucous membrane and in the capillary vessels. Aside from these buccal manifestations, most of the untoward reactions resulting from bismuth therapy can be traced to faulty technic.

An ultra-scientific procedure would include an x-ray examination which would show exactly how much bismuth is being absorbed, and the doses and number of injections gauged accordingly. It would eliminate any possible cumulative action and the production of toxic effects. But, such an examination would have to be made before each treatment, which, of course, would be impractical. However, it is generally conceded by those who have practiced bismuth therapy that if special attention is paid to the details of preparation and the technic of administration of the drug, and the patient is observed carefully, that many of the possible disadvantages could be avoided.

It has been our practice to follow the technic employed for the intramuscular injection of mercury. Special care should be taken to have the bismuth preparation thoroughly mixed and the needle for injection must be long enough to penetrate deeply into the muscle. Before injecting the mixture, one must be careful to see that a vein has not been pierced in order to prevent embolism. When withdrawing the needle, the mus-

cle should be pressed down firmly to prevent any of the drug from escaping into the fatty tissue. The injection area should be thoroughly massaged as soon as it is freed of the needle, and the usual aseptic precautions observed throughout.

The dosage depends entirely upon the preparation used. When we first began to use neotrepol, the injections were given every four days, beginning with doses of one-half cubic centimeter, and increased rapidly to two cubic centimeters. Later we changed the routine to one every week.

The intravenous injection of bismuth preparations is contraindicated since it may produce severe toxic symptoms, besides having a low trypanocidal action, according to the work of Myers and Corbitt.

In the course of my experience with the use of bismuth, and from my observations of over a period of two years, the disadvantages encountered have been very few. These included occasional but very slight pain at the site of injection, the rare formation of a black line on the gums, and hypertrophy with black pigmentation of the papillae on the dorsum of the tongue. Some cases of kidney irritation and stomatitis were observed, but these were comparatively rare. To illustrate, in fifty cases, selected at random, which were treated with bismuth at the Cornell University Medical College Clinic, only six showed stomatitis and two kidney irritation. In one case only did a sterile abscess develop and this seemed to be due to the fact that some of the drug was allowed to escape into the fatty tissue. The stomatitis seemed dependent upon the individual, and could often have been avoided by proper oral and dental supervision, the use of a hydrogen peroxide mouthwash, or by the injection of contramine. Although bismuth seemed to produce local congestion at the site of injection, in all the cases treated we have had very few complaints of any pain.

On the other hand, the advantages of bismuth therapy so far overbalance these unpleasant effects, as to reduce their importance in our consideration of the use of the drug to nil. In a recent paper by Hans J. Schwartz and myself in which we reported results obtained in the treatment of syphilis by bismuth, citing fifty cases which were generally indicative of the entire experimental work, we found that it caused a fairly rapid involution of the cutaneous lesions and general manifestations in all three stages of the disease. However, in a great majority of cases this action was slower than when compared to that observed in arsenotherapy.

A PLEA FOR BIRTH CONTROL OF THOSE WHO ARE PHYSICALLY OR MENTALLY UNFIT, OR FINANCIALLY UNABLE TO CARE FOR THEMSELVES AND THEIR CHILDREN

Robert Emmet Jameson, M.D., Davenport

Syphilis, tuberculosis and other contagious and infectious diseases that may be inherited or transmitted from mother to her infant, during pregnancy, should be positively prevented by birth control methods suggested by the American Birth Control League, Inc., of New York. Their methods have been adopted by law in several states of the United States, also by several foreign countries. The appliances and methods used for the prevention of pregnancy are recommended and have been proven to be positive preventives, that are sane, safe, harmless and inexpensive.

That paupers breed paupers, is an acknowledged fact, and known to be true by all social workers, overseers of the poor, charitable organizations, etc. Tax payers are at present and have been for years burdened with the care of thousands who have been born infected with syphilis, tuberculosis and other infectious, contagious and transmissible diseases, all may be prevented by birth control methods advocated and employed. Not to mention the thousands more, epileptics, feebleminded, etc. Millions of dollars are required yearly for the support and the care of these human wrecks who can never be made normal, but who must be cared for as long as they live, by the tax payers of the community in which they live.

To build institutions for the care of the thousands of paupers, epileptic, feebleminded, and those mentally and physically unfit and financially unable to care for themselves or their children has been in the past and will be in the future demanded from the healthy persons of the communities in which taxation is necessary. Thousands of these unfortunates demand care and attention made possible by taxation, which is a burden to the healthy members of society, and each year sees added hundreds of such dependents, which will require hundreds of new and larger institutions for their care, and millions of dollars will be required from the tax payers, to support these institutions, all of which could be prevented by birth control methods.

The attention given the raising of children by the majority of people is less than the attention given by stockmen to the raising of cattle, pigs, horses, etc.

It is stated that about seventy-two per thousand of children die before they reach the age of one year, while stockmen have less deaths of their live stock, only about nineteen or less per thousand.

Paupers, criminals and those mentally and physically unfit increase their kind six times as fast as do normal peoples. This fact is known by state, city and county officials, who are making efforts to stop the yearly increase of their dependents.

Many well meaning charitable organizations know these facts, but are handicapped in preventing many of the conditions that exist, due to the fact that sufficient publicity has not been given to the general public. Lawyers, ministers, business men and women all give their time and money to various charitable organizations which each year solicit aid for the less fortunate. Time and money is given with pleasure, without once stopping to investigate the why of pauperism, who they are, or what they are. Its cause and prevention have never been seriously considered by those who support the various charitable organizations. If it were a business venture, an investigation would be made. It being given for sweet charity, no questions are asked. We know of cases similar to the one that I will mention. A family of six persons who were paupers, had the misfortune (or good fortune) to have their rented house burned to the ground. Various charitable organizations learned of the family's misfortune, each sent a representative, food, clothing, etc., were supplied, and when a final count was made, there was found fifteen blankets. (Which would suggest to the average business man that a central office where all charitable organizations would learn of the needs of those they wish to aid, thus avoiding duplication and needless waste.)

The healthy, independent, normal individual in each community who supports his community by taxes finds each year added demands for thousands of dollars for preventable pauperism.

Personally I am lead to believe that those born whose parents, and their parents before them have been public charges should receive special consideration in the matter of propagating their kind.

I believe each community should appoint one or more persons to make an investigation of their paupers, and those who are receiving aid and charity, to determine the cause; aid should be given those who are found deserving; and those who are diseased, who are mentally and physically unfit, whose children would be a burden to the community in which they live, should be prevented by law from multiplying and adding increased tax burdens to those who support the community in which they live. Such facts should be collected and given to the public. Educational campaigns should be held so that all should have an opportunity to learn the facts.

Churches, lodges, etc., should be asked to assist in the prevention of pauperism with a clear understanding of the causes of pauperism, and with proven methods for the prevention of pregnancy in those who are diseased, or are mentally and physically unfit and financially unable to support themselves or their children.

In several states in our own country and in several foreign countries laws are adopted permitting the use of sane, safe, harmless, inexpensive and positive methods for the prevention of pregnancy. With reduction in taxes, suffering, misery and want thus prevented, people healthy and happy, infants born healthy, whose parents are independent, the present generation will make possible for the future lessened suffering of the innocent, more independent peoples, and the avoidance of misdirected expenditure of millions for housing and feeding of human wreckage.

Are we as medical men to be mislead by false beliefs, with our scientific training in medical facts which have been proven and adopted by leading authorities and investigators, of well meaning persons who have been and are under false impressions, and have not one single scientific fact to support their views?

Personally I am in favor of birth control as an advanced step in preventing added hundreds of paupers yearly to be supported by the tax payers.

BUSINESS PRINCIPLES IN THE PRACTICE OF MEDICINE

Dr. Carl C. Johnson of Lincoln, Nebraska, has been estimating the yearly earnings of medical practitioners in Nebraska, based on a total of two thousand practitioners. Assuming the average closely estimated gross earnings from medical practice exclusively amounts to $6,500 a year and after removing the elements of expense in conducting a private practice it appears to leave the doctor with an average net earning of $1,575. On removal of all the elements of expense Dr. Carl Johnson advises that by a better method an average saving of $1,021 could be accomplished. Under the present conditions the average doctor's net income amounts to $1,575, with the new method of saving advocated by Dr. Johnson the net income would be $2,596.

The Journal of the Iowa State Medical Society

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CANCER COMMISSION

A commission to investigate cancer in Massachusetts has made a rather important report on certain features of the disease of general interest. There are certain points which we may refer to as a starting point, but in reality, among conclusions arrived at by the commission in following their enquiry: "Massachusetts has the highest death rate (cancer) of any state in the Union. The proportionate mortality for cancer among inmates of almshouses and insane institutions is lower than among the general population of the same age distribution. The cancer rate increases with density up to a population of about 4000 per square mile. From there it remains nearly stationary. The cancer rate increases from west to east in Massachusetts."

These findings agree substantially with the observations of Roger Williams, made in London twenty years ago, on the "Geographical Distribution and Incidence of Cancer". It would appear from the carefully made investigation of the Massachusetts commission and those of Roger Williams that cancer is a disease of civilization. Massachusetts has the largest population per square mile of any state in the Union and the eastern section of the state is more thickly populated than the western portion. It was shown by Roger Williams that the cancer rate among uncivilized areas of the world was much less than among civilized portions.

The Massachusetts rate in almshouses and institutions for the insane was less than among those enjoying better conditions of life. Roger Williams found the cancer rate higher among people well nourished than among people who lived on poorer food. He found as did the Massachusetts commission that the denser population gave the higher cancer mortality.

It appears then that the denser the population the greater the incidence of cancer. That the well fed and more prosperous people present the greater cancer mortality.

An important consideration is the difference in the time element in the life of those operated upon and those not operated upon. "The average duration of life for operated cancer cases which die of cancer is 22.8 and for non-operated cases 20.0". The commission state that operated cases live on "the average nearly three months longer than the non-operated cases. If the operated cases did not include those that die as a result of operation, among which are the poor operative risks, the average duration for the survivors would be longer". In considering these figures we must keep in mind when the case becomes a cancer case. The commission states that, "The average duration from onset to operation is 10.3 months. The average patient comes to a doctor eight months after first noticing symptoms". If we are to consider the eight months or the ten month period of the cancer as the starting point very little is gained by operation so far as the prolonging of life is considered.

If we are to start from a point before a reasonable diagnosis of cancer is made the result may be quite different.

The commission find that; "The statistical study showed that cancer of all forms and all ages over thirty has been on the increase since 1850, and is still increasing. The rate among females has been constantly higher than among males. The male trend has been going upward at a constant rate throughout this period. The female rate, however, while still increasing, is doing so much less rapidly than formerly".

This report was published in the Boston Medical and Surgical Journal for March 4, 1926, and while no attempt is made in the way of treating the disease beyond an early diagnosis, it presents important facts that may be of vital importance in the study of cancer. Roger Williams twenty years ago reached similar conclusions but statistics, except the English statistics prepared by Dr. Farr, were incomplete.

CONSOLIDATION OF STATE COLLEGE AND STATE UNIVERSITY

For many years the question of consolidation of the State College at Ames and the State University at Iowa City—has from time to time been up for discussion on the ground of economy and efficiency. It was held that certain departments were unnecessarily duplicated and that some were unwisely placed. In the formation stages of development of these institutions, consolidation might have been the wise course to pursue as in Wisconsin and Minnesota, but now, as these schools have expanded in their own particular directions, it would be to the loss of both schools to be merged and reorganized. Each school has earned, and received a reputation world wide in their own sphere. It may be contended that the period of their future history may extend through ages and that the expense and loss of reorganization extending through the many years would be small. But the question should not be measured from a money point of view, only, but from a much higher one, of public good.

The College at Ames is on a road of expansion and extension that should not in the least be hampered by restriction of space or opportunity. The University at Iowa City is likewise expanding in its own sphere, the bounds of which cannot now be measured. We need not mention the confusion that would arise from a merger that would change place and name, for that would soon pass, but we think of the different phases of activity and the congestion of space and the difficulty of administration.

The cause of education will be fostered by the separate existence of these two schools, under a single board, and each will grow wider in phases of activities, not so much in number of students as in field of useful activity. The traditions of the University, in the field of language and literature, and the new idea of science in industry and agriculture, at the State College, should not come in direct competition but should operate each in its own environment.

The report of the special committee of three educators who made a survey upon the order of the legislature—to Governor Hammill—should settle the question of consolidation for a long time to come. The committee consisted of Dr. Charles Capen of the University of Buffalo, Edward C. Elliott, president of Purdue University and George F. Zook, president of the University of Akron, Ohio.

The survey included not only the institutions above named but also the State Teachers College at Cedar Falls. The committee advised against any material change. The advantage of such surveys is indicated in a recommendation that the course leading to a degree in Journalism should be confined to the State University. It is true in educational institutions as in many others, to have an ambition to expand in unnatural ways and some restraining agency may be necessary to keep them in natural channels. There is always danger of expanding at the expense of thoroughness.

We are not in sympathy with the spirit of boastfulness, but we permit ourselves to say that we are proud of our educational institutions and can afford to have a full statement of their merits.

QUESTIONS THE MEDICAL PROFESSION SHOULD CONSIDER IN RELATION TO WELFARE ORGANIZATIONS

There is a more or less prevalent feeling in medical circles that doctors do not receive the consideration they are entitled to. In conditions of danger, of pain, and the stress of fear, the physician or surgeon is turned to with deep anxiety, but in periods of peace and comfort he is forgotten in a way that causes the practitioner grief and sorrow, he feels that his role is no more important than the grocers. If he were to consider the history of civilization and of the human mind, he ought to feel a sense of relief in that his condition does not differ from the condition of mankind in general. Jean Val Jean, an escaped convict, built up an industry in a decayed village in France that gave great prosperity and happiness to the people, but when the officers of the law at last discovered him, the villagers turned against their benefactor and the remainder of his life was spent in fleeing from the law. The beginning of his trouble lay with those so greatly benefited. This is a part of the history of mankind.

Fifty years ago the function of a practitioner of medicine was to relieve the personal ills of the afflicted he was called upon to treat, but did not extend beyond that. A few years later it was discovered that certain diseases were contagious and infectious, and upon him fell the additional duty of protecting the well by isolation and watching the water supply, and as time passed, his duty to the well was even greater than to the sick. Now his obligations to the well have been so multiplied that it has become impossible for the physician to do more than to administer to the sick, and it has become apparent that non-medical personnel must consider the welfare of the well.

The entrance of the non-medical personnel into welfare services has become a source of annoyance to the physician, a feeling in which the public do not participate, and the public is found to deprecate the attitude of the medical profession. Should this be so? May it not be true that if the physician extended his viewpoint beyond the treatment of the sick, and beyond the operating table to embrace the welfare and the health conditions of the family and the community—that the entire field should be left open to him? Is it true that the predilection of the physician and his training unfit him for this large field of usefulness and the outsider comes in?

There are many welfare agencies in operation that supplement the activities of the medical profession, agencies which the practitioners have little liking for or interest in, but have a degree of real usefulness. These the doctor should encourage, such agencies that by a fair cooperation he may direct in a way that will be helpful to the public and add to his credit. There are of course many mistaken activities that are not helpful, partly because of incompetent direction, activities that may be harmful in their effects, sometimes even in direct antagonism to wise professional opinion. We have heard much criticism of some of these activities by medical men and we have heard harsh statements on the part of the public against the medical profession for a narrow and selfish spirit. We have often thought that if the general practitioner, who has most to do with welfare activities, would join, after a fair investigation of their purposes and aims, a mutual advantage would result.

COST OF PRIVATE MEDICAL CARE

The Boston Medical and Surgical Journal comments editorially on the report of the Committee on Public Health of the Kings County Medical Society on cost in private medical practice in Brooklyn, also, in Boston and other Massachusetts towns. We have no such committee and while conditions in Iowa are quite different from those in larger cities of older and in some respects richer communities, yet we may draw conclusions from these observations that may be helpful to practitioners in relatively smaller cities and in agricultural communities.

The Committee on Public Health of the King's County Medical Society has recently conducted a study of costs in private medical practice which has been reprinted from the Long Island Medical Journal. Conditions in Brooklyn are somewhat unique in that the proportion of general practitioners is higher than in other cities of the United States. Thus Brooklyn has 23 per cent of its practitioners who are specialists, of whom only half are exclusively specialists in comparison with Boston where 37 per cent are specialists of whom three-fourths are exclusively specialists. Even in Lowell and Haverhill 34 and 38 per cent respectively of the physicians practicing are specialists, a higher proportion than in Manhattan and the Bronx, whose specialists number 30 per cent of the total, with two-thirds of them exclusively specialists.

The usual rates for office and home visits in Brooklyn were determined by this study to be $2 and $3 respectively for general practitioners; $5 and $10 for specialists. The lowest rates found were 50 cents and $1, and the highest $15 and $25. For operations the fees ranged from $50 to $500; for consultations, from $25 to $100. A general feeling was found to exist among the doctors interviewed that there is a great disparity between the fees of specialists and general practitioners.

From the patient's point of view the average family seems to be ill able to assume the expenses it is liable to incur, of which additional costs amount to over one-half the amount of doctors' fees. The indications seemed to the investigators to be that "in many cases under private medical care the cost of sickness is a considerable burden when measured against the amount available for that purpose in any one year in the average workingman's family of five, where the family income falls below $2,500 or $3,000; that medical fees are fairly uniform for the majority of doctors, but vary considerably among a number of them; that the practice of reducing fees prevails generally but is not based upon any reliable method of ascertaining the patient's ability to pay; that reduction of fees appears to occur in less than one-fifth of all cases; and that professional fees amount to less than one-half of the total expenditures for sickness.

A similar study in some of the Massachusetts communities would be of interest.

MEDICAL ADVERTISING

An interesting editorial observation appears in the Cincinnati Journal of Medicine, suggested by a similar observation in the American Medical Association Journal, that readers of popular magazines consult the advertising pages with as much interest as the reading pages proper and it is probably true that the physician looks over the advertising pages of his medical journal for the

purpose of securing information concerning matters he is interested in. The mind of the average medical practitioner does not differ materially from the mind of the average citizen, and he is interested in essentially the same things. He patronizes hotels, commercial houses, he buys automobiles and automobile supplies and, as to the latter, no man is more discriminating or considers more carefully the class of motor car best suited to active service. It has been a surprise to us that automobile agencies fail to consider in a special manner, so large a class of purchasers.

WHEN TO RETIRE

At the meeting of the State Society many gray heads were seen. It does not necessarily follow that the man with gray hairs is not yet a useful producer. The United States Government has established certain age limits for officers, sixty-four years being the period for active duty. Many industrial corporations, particularly transportation, fixed the age limit at seventy. The United States Government had permitted employes to retire at the age of sixty but congress has concluded that sixty is too young for pensioners and has raised the age to sixty-two years for optional retirement with gradations to sixty-five and beyond. These bills before congress has raised the question of when to retire, therefore several newspapers have taken up the discussion. The case of President Olds of Amherst College, remains an efficient servant at the age of seventy-three. The Cincinnati Inquirer observes that men know how to live more sensibly than they formerly did and therefore live longer, and it may not be possible arbitrarily to fix the period of retirement and notes the case of Justice Oliver Wendell Holmes, now eighty-five years old, is still capable and vigorous with a ripe wisdom which the great court needs. Chauncey Depew holds that he performed his best work between the ages of seventy-five and ninety and he says most of the active men he knew who have died, did so after they quit working.

Correctionville, Iowa, Sept. 27, 1926.

Journal of the State Medical Society,
Des Moines, Iowa.

Gentlemen: A circular letter from the State Board of Health has recently come to my desk urging state-wide diphtheria immunization to be brought about by the cooperation of the public schools and the local physicians. Now this has already been accomplished in numerous communities throughout the state and I find that in most all instances the physicians were expected to offer their services "gratis". Now there is the rub. Why should they?

Why is the toxin-antitoxin not administered by the parents, or the school teachers or possibly by the janitor? Evidently because the physician has acquired a knowledge, a skill and a technique which these others do not possess, therefore why should he not be paid a reasonable sum for something which has cost him considerable time and money to acquire? It seems that the physician is called upon almost daily to give of his time and skill in making examinations for various farm bureau health contests, or baby contests, or health check-ups in the public schools and the public expects us to do it all "gratis" and most of us have been cheerfully doing it gratis, but brothers, do you not think it about time we were putting a check on this avalanche?

If one wishes to argue the humanitarian side of the issue why not apply it to other businesses as well as that of the physician?

Many children come to school with inadequate clothing. Why not ask the merchants to furnish a good warm suit of underwear to each school child for simply a "thank you". If they furnished all these at strictly cost it would not be as much as is being asked of the physicians, but can any of you imagine the merchant doing such a thing to rich and poor alike? I say you can't.

These demands on our time are growing more exacting every day and I believe it is high time that we were taking this matter up in our various societies and arranging an adequate but reasonable schedule of fees to cover this class of work. Such fees to be paid by the parents when they are able or from the county poor funds or some similar fund where it cannot be met by the parents.

The veterinarian does not immunize their hogs without a charge, why should we immunize the children free? Are they not worth as much?

The "Good Book" says, "A laborer is worthy of his hire". Let us follow the "Scriptures".

Very truly,
H. A. Smith, M.D.

THE FIRST VOLUME OF "THE MEDICAL HISTORY OF ILLINOIS" IN PRESS

Announcement is made that the first volume of the "History of Medical Practice in Illinois" is in press and will be delivered at an early date.

This is the work compiled by a committee as a monument to medical pioneers and as a commemoration of the seventy-fifth anniversary of the Illinois State Medical Society. This volume carried the history from geologic times up until the year 1850. From 1850 to the current date will be cared for in a later volume. Dr. Lucius Zench is the editor of Volume One.

The committee feels that all subscribers will agree that an unusual piece of work, replete with interest

and crammed with citations of piquant charm and solid historical value, rests between the covers of this book.

The volume, however, will soon be able to speak for itself.

Every physician, library and county medical society should have a volume of this history. Sold on subscription. Price $10.

NOTICES POSTED IN HOSPITAL LIMITING ITS LIABILITY

The district court of appeal of California, first district, division 2, in affirming a judgment in favor of the plaintiff for damages for burns on one of his legs while he was a patient in the hospital operated by the defendant corporation, says that the jury brought in a verdict for $5,000, but the plaintiff consented to waive $2,000 of the verdict. He was a child who had been taken to the hospital to have a tonsillectomy performed. His mother stated at the hospital that she wanted a special nurse detailed. A nurse in hospital uniform made the bed and put in a hot water bottle, and, according to the evidence, another nurse put the boy in bed, and afterward there was a special nurse for him—one procured by the defendant, but for whom it denied any responsibility. However, the court thinks that it was quite clear, in its view of the evidence, that there was no error committed in giving an instruction taking from the jury all issues excepting the amount of damages. There was no legal evidence before the trial court that the first nurse mentioned, or the one mentioned as having put the boy in contact with the hot water bottles, or the special nurse, was not, each of them, the agent of the defendant. The law imposed on the defendant the burden of introducing evidence to show that said individuals, and especially the last two mentioned, were not its agents, and that the defendant was not guilty of negligence. It wholly failed to sustain that burden.

There was evidence that the defendant had posted in different places in its premises certain notices limiting its liability. There was no evidence that the plaintiff or his parents saw or read the notices or entered into any contract limiting the liability of the defendant. The defendant did not call to the attention of this court any statute that authorizes a hospital to limit its liability by posting notices. The trial court did not err in refusing to admit the contents of the notices in evidence. Another ruling was clearly correct, which sustained an objection to the attempt of the defendant to introduce in evidence what it claimed to be the custom obtaining in the city in regard to hospitals employing special nurses called in from outside, controlling and supervising such nurses, and collecting for any paying to such nurses their compensation.

Hearing denied by the supreme court of California.—Journal of the A. M. A.

CARE IN SELECTION OF RAILWAY EMPLOYES

That the medical profession may know of the care exercised in securing man power for railway service we present the recommendations recently offered at a meeting of the Medical and Surgical Section of the American Railway Association. It is not easy to put such regulations at once into force but steps are being taken in that direction.—Editor.

To the Members:

The committee on Occupational Diseases and Hazards in its report to the Medical and Surgical Section of the American Railway Association at its meeting in Dallas, Texas, on April 20, 1926, made recommendation that certain rules and regulations be suggested to the chief surgeons as matter of information and advice—the heeding of which will tend to raise the man-power of the American railroads and at the same time to minimize and prevent many serious accidents.

It was recommended that complete physical examinations be made wherever possible of all employes who may be deemed responsible for the occurrence of any accident, attributable in whole or in part to:

1. Failure to obey orders.
2. Failure to recognize and heed signals.
3. Lack of alertness with failure to manifest definite, quick and positive reaction to impressions or circumstances.
4. Sudden mental or physical breakdown of employes.
5. The assumption of unusual or unnecessary risk; and/or
6. General disregard for the safety of self or others.

These suggestions, while made with special reference to syphilis—the ravages of which are likely to impair the mental and nervous system, will apply with equal force to any condition lending to lower the employe's man-power.

Will you at this time kindly supply the committee with the following advice:

1. Have you, or will you, inaugurate such examinations on your lines?
2. How many employes examined under these conditions have been found physically defective or with lowered man-power?
3. Give the number of cases where physical disqualifications have been found and the diagnoses made?
4. Will you assist the committee by keeping a record of all such examinations and the results thereof to be made between now and December 31, 1926, and report your observations immediately after January 1, 1927?

Please be assured that any and all information supplied to the committee by you will be considered and held in the strictest of confidence and neither your name or the name of your railroad will be divulged. The information will be used only for

compiling statistics to be presented to the Section at its next meeting.

J. C. Caviston,
Secretary.

THE GOVERNMENT NEEDS PHYSICIANS

The U. S. Civil Service Commission announces an open competitive examination for medical officers in which the applications for positions will be rated as received at Washington, D. C., until December 30. Competitors will not be required to report for the examination at any place, but will be rated on their education and training and experience. There are vacancies in the Indian Service, public health service, coast and geodetic survey, Panama Canal Service, Veterans' Bureau and other branches. The entrance salaries range from $1,860 a year to $5,200. Senior medical officers may be promoted to $6,000 after six months, and higher salaried positions may be filled through promotions in accordance with civil service rules. Physicians are especially needed in the specialties, and in general medicine and surgery.—The Journal of the A. M. A.

CONGRESS PENSIONS YELLOW FEVER VOLUNTEER

We are informed by the Journal of the American Medical Association that Clyde L. West, who volunteered to be bitten by mosquitoes infected with yellow fever at Camp Lazear, Cuba, in 1901, has been pensioned by congress, the war department announces, at the rate of $100 a month for the remainder of his life. West enlisted in the U. S. Army at Toledo in 1899, volunteered to be bitten in connection with the work of the Walter Reed Commission, was taken sick with yellow fever February 3, 1901, and was discharged from the service July 10, 1902, at Fort Myer, Virginia. He was employed as watchman in Washington by the office of public parks and buildings.

FOCAL INFECTION AS A CAUSE OF RHEUMATISM

There has been a rather widespread belief that rheumatism is due to an infection arising from some focus that might be detected in some part of the body but it is often observed that the removal of foci which were believed to have some relation to rheumatism is not followed by improvement and it is also observed that many cases of rheumatism occur without the physician being able to detect infection foci. In view of all these facts the question may arise, are all forms of chronic arthritis to be regarded as being due to infection? Recent contributions have appeared which devote more space to the treatment of this widespread disease than formerly, and while it is still believed that no specific treatment exist, available therapeutic measures have been found far more satisfactory than nihilism. According to an editorial in the International Medical Digest, "All are agreed that rheumatic conditions constitute the principle reason why cardiac diseases are still among the first causes of death. Indeed, some think it should be regarded primarily as a cardiac disease. In any event this disease has been taken up for discussion more frequently during the past year and many of the points brought out are reviewed in a rather extensive literature."

ANOTHER MEDICAL DIPLOMA MILL?

Recent dispatches from Kansas City tell of the incorporation of a new medical school in that city, as the American Medical University. We are informed that the institution is operating in the same building formerly occupied by the Kansas City College of Medicine and Surgery, diploma mill, whose charter was revoked by the supreme court last June. Some of the incorporators of the new school are recent graduates of the defunct institution.

Apparently no time was lost by the promoters of the American Medical University in starting what appears to be another low grade medical school in Missouri, using the debris of the discredited and defunct institution as a base of operations. The charter of the Kansas City College of Medicine and Surgery was revoked June 23, 1926, the charter of the American Medical University was issued July 29, and the school was opened for business August 9. The charter for the new institution was issued under the law governing business corporations so that the school cannot claim tax exemption as an educational institution. In other words, it is frankly a corporation for profit.—Journal of the Missouri State Medical Association.

CHIROPRACTORS INFLUENCING CONGRESS

We are informed by the Boston Medical and Surgical Journal that chiropractors are appealing to congress for recognition, placing chiropractic on a "secure national basis".

Each chiropractor is urged to send five letters at least, naming Senators Reed, Smoot, Richard, Ernst, Simmons and George as especially influential members of congress. Chiropractors are urged to write to their own senator and representative. Special advice is given: "Get these letters streaming out of your community at the rate of fifty to one hundred daily". One heading reads: "Make chiropractic available to each veteran at government expense"; another heading is, "Satan, the greatest surgeon and dope shooter of all, slices off fifty years from each normal life span; one hundred and twenty years is the age for which every man is entitled to hope if he obeys the law of God and keeps his back bone normal". The physician is referred to as "the Medical Hun who has a strangle hold on the lives

of these sick and suffering men". The claim is made that chiropractic can restore those men who have been pronounced incurable by the medical profession.

The bill in question is Senate 4124, amending 10,240.

The editor observes; "The result of this propaganda will be a matter of considerable interest for it will give a better understanding of the mental status of the congressmen, we believe, than will be brought out by the study now being endorsed by congress".

Chiropractors are advised to circulate petitions, which may be sent to George B. West, Washington, D. C.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

Medical Interne (Psychiatric)

Applications for medical interne (psychiatric) will be rated as received until December 30. The examination is to fill vacancies in St. Elizabeths Hospital, Washington, D. C., at $1,860 a year, and vacancies in positions requiring similar qualifications at this or higher or lower salaries.

The duties, under immediate supervision, are to admit patients, take histories, make physical and mental examinations and record findings; to make ward rounds of inspection, note charts, record observations; to prescribe for minor ailments or for acute or emergency cases and to dispense medicine in emergency; to perform minor surgical operations and to assist at major operations and in redressing; to administer anesthetics; to make routine laboratory tests and analyses; to assist at out-patient clinics in dressing and in administering vaccines; to keep records, make up case historics, answer correspondence relating to patients, and compile statistics requiring medical training, and perform related duties as required.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the post office or customhouse in any city.

BEQUEST TO UROLOGIC CLINIC

The will of Louis Sherry, filed June 18, bequeathed about $700,000, of which $500,000 will be immediately available, to the J. Bentley Squier Urological Clinic at the Columbia-Presbyterian Medical Center. This will bring the sum available for the clinic it is reported, to about $1,300,000. The clinic will occupy the eighth floor of the new Presbyterian Hospital building, and was originally intended to accommodate sixty-four patients. Mr. Sherry's will directs that his bequest should be used to provide beds, room and other accommodations for persons suffering from cancer, and in maintaining such patients according to the best judgment of the officers in charge of the hospital.—Jour. A. M. A.

JOHNS HOPKINS FIFTIETH ANNIVERSARY

On October 22nd the trustees and faculty celebrated the fiftieth anniversary of the Johns Hopkins University at the Lyric Theater.

The exercises commemorate the formal opening of the new building of the school of hygiene and public health. Governor Ritchie delivered the address of welcome. Introductory remarks by Dr. William H. Wetch, and an address by Dr. Andrew Balfour, director, London School of Hygiene and Tropical Medicine, on "Hygiene as a World Force". Professor T. Neufeld, director, Institute of Infectious Diseases, Berlin, delivered an address on "Variability of Bacteria with Especial Reference to Infectious Diseases". L. Levy Bruhl, professor of the history of modern philosophy at the Sorbonne in Paris, gave an address.

MEMORIAL TO DR. CARMAN

The time usually devoted to the meeting of the general staff of the Mayo Clinic, September 29, was given to the presentation of a bronze tablet commemorating Dr. Russell D. Carman, by the American Roentgen Ray Society. The presentation was made by Dr. Edward H. Skinner, Kansas City, chairman of the executive council of the society. Short talks were also given by Dr. Augustus W. Crane, Kalamazoo, and Dr. Preston M. Hickey, professor of roentgenology, University of Michigan Medical School, Ann Arbor. Responses were made by Dr. William J. Mayo, Dr. Charles H. Mayo and Dr. Louis B. Wilson. Dr. Alexander B. Moore presided.—Jour. A. M. A.

REGISTRATION UNDER HARRISON NARCOTIC LAW

It has come to the attention of this office that a great number of persons, registered under the Harrison Narcotic Law, as amended, are making changes in the location of their business without notifying this office.

The commisioner of internal revenue insists that this practice must be discontinued. Regulations No. 35, now in force, article 59, page 34, reads in part as follows.

"He should, not later than the month in which the removal occurs, register the fact by filing with the collector of the district within which the old place

of business is located, an additional Form 678, executed under oath, or otherwise, as required by article 10, with such modification of the printed matter as is necessary, setting forth the time and place where he intends to engage in the business described."

To avoid penalties attendant to failure to comply with the above notify this office immediately of such change.

L. E. Bladine, Collector.

THE WHITE CROSS INTERNATIONAL ANTI-NARCOTICS SOCIETY

D. S. Fairchild, Sr., M.D., Editor,
Journal of Iowa State Medical Society.
Dear Sir:

The White Cross is convinced that narcotic addicts are sick people who need the care of physicians like other sick people. May we invite your attention to the Smoot Narcotics Bill (S. 4085) and the identical Green Bill, and to their effect on the medical profession, if they are passed by congress.

Physicians have for years been hampered beyond endurance by arbitrary regulations whose slightest violation is punished with fines and imprisonment often making it impossible for honest doctors to treat narcotic patients. An even worse result is the creation of organized armies of drug peddlers to whom the addict is forced to go when his doctor is not allowed to give him care.

These restrictions are no part of the law. The Harrison drug law expressly provides that its limitations on dealers should not apply to physicians in their regular professional practice. The restrictions are simply revenue bureau measures. While issued under color of carrying the law into effect, and doubtless with good intentions, they have reversed the intent of congress and filled doctors with dread of prosecution until they dare not act.

The United States supreme court has recently declared some of these regulations unconstitutional. The revenue bureau, lest its unwarranted power should slip away, has now come out openly and introduced these new bills inflicting the extreme penalty on doctors who dispense narcotics unless to a patient in hospital. It is almost incredible that a bureau whose sole function is collection of revenue should assume to say that it and it alone is competent to direct American physicians in the practice of their profession. Moreover, if these bills become law it will not only bind the doctors hand and foot as regards narcotics patients, but it will open the way to still further invasion of the freedom of the medical profession. Why may not the revenue bureau go ahead and forbid calomel? Why not forbid quinine?

The United States is the only nation imposing such restrictions. In Great Britain the ministry of health in a recent official publication deprecates even the registration of addicts as "impairing the confidential character of the relation between doctor and patient".

Many medical journals are already calling on physicians and medical societies to register their protests with their congressional representatives. Enclosed is a memo of some expressions that have come to our hand. Quite possibly you also have already spoken of the subject in your journal, but even so may we not ask you to continue still further your protests? These bills introduced with the prestige of the revenue bureau, and backed up by sinister outside influences, will undoubtedly be rushed through congress in December unless strong and organized opposition overcome them.

Very truly yours,
Wm. K. McKibben,
Executive Sec'y.

SOCIETY PROCEEDINGS

Dallas-Guthrie County Medical Society

The regular meeting of the Dallas-Guthrie County Medical Society was held at the Hotel Panora, Panora, October 21, 1926.

The program was as follows:

Bronchial Asthma—Dr. E. L. Braddy.

Tuberculosis—Surgical Lesions—Dr. I. O. Pond.

Results of Treatment at Boulder Lodge Sanitarium—Dr. J. W. Kime, superintendent.

Election of officers.

Officers—President, Dr. H. E. Kleinberg, Redfield; vice-president, Dr. Roy R. Jones, Linden; secretary-treasurer, Dr. S. J. Brown, Panora; delegate, Dr. M. N. Voldeng, Woodward; alternate, Dr. J. W. Harrison, Guthrie Center; board of censors, Dr. J. W. Harrison, Dr. C. O. Sones, Dr. E. T. Warren.

Fayette County Medical Society

The Fayette County Medical Society met at Oelwein recently. Dr. C. L. Kern of Waverly presented a paper on Appendicitis. Dr. A. E. Conrad of Decorah, a paper on Local Anesthesia, and Dr. Carr a paper on Puerperal Septicemia. Among those present were Drs. Darnell, West Union; Jerdee, Clermont; Wood, Wadena; Hazz and Arlington, Brown and McCraw, Elkader; Ainsworth and Cahill, Volga City; Walsh, Hawkeye; Wille, Aurora; Hall, Maynard; Osnis, Readlyn; including all the physicians of Oelwein.

Western Surgical Association

The Western Surgical Association met in Duluth, October 13 and 14, 1926, with an attendance of 103 members. The general character of the program was good and all the writers responded. One need not comment on the character of the papers as the association has passed the period of praise or otherwise. No one would venture to appear with a carelessly prepared paper.

The committee of arrangements added much to the pleasure of the occasion by the carefully prepared social program. While this is a seriously minded body of medical men they enjoy the social side of life.

At the close of the session Dr. Robert Coffee passed the gavel to Dr. Louis H. McKinnie of Colorado Springs. The place of the 1927 meeting will be Omaha.

THE ELEANOR MOORE HOSPITAL, BOONE

Many years ago, Sam Moore, a wealthy banker, in memory of his mother gave a considerable sum of money to build a hospital at Boone. The hospital under the direction of public spirited citizens rendered valuable service to the community. Unfortunately, as in so many cases, a productive fund for its maintenance was not provided, and at the end of the year there was a deficit, which was made good as long as Mr. Moore lived. After his death the usual difficulty came about, of an increasing debt for maintenance. The deficit was not large but embarrassing. Various measures were adopted to keep this useful institution going. The reasonable and logical method was to get the county interested and meet the cost of administration by taxation. In the meantime to embarrass the situation, a destructive fire occurred. The hospital became recognized as an indispensible necessity to a growing and enterprising city, and after other means failed, the county took it over under the name of the "Eleanor Moore County Hospital" with fifty beds. The August twenty-sixth number of the News-Republican gives an account of the opening of the "Reconstructed Eleanor Moore County Hospital".

The people of Boone are to be congratulated on the successful effort to secure an established hospital, as the reasonable and logical means of securing adequate medical service for the public and a material help to bring about the best development of the local profession.

PATIENTS IN ARMY HOSPITALS

It is reported that there were 5,150 patients in army hospitals in the United States, July 3, of whom 2,665 were active army and navy personnel, 1,786 beneficiaries of the Veterans' Bureau, 136 beneficiaries of the Soldiers' Home, and 563 were on a civilian status. At the corresponding time last year, there were 5,314 patients in these same hospitals. Of the number 3,621 were in general hospitals, including the station hospital at Fort Sam Houston.

NATIONAL METHODIST SANITORIUM

The first unit of the National Methodist Sanitorium was recently opened at Colorado Springs, Colorado. There was no formal ceremony. The official dedication and opening will take place November 9 while the board of bishops is in session at Denver, Colorado.

This is the first unit of the $2,000,000 sanitorium. The entire project when finished will have 500 beds and is for tuberculosis patients only.

INVESTIGATION OF CHLORINE GASSING

The board of medical officers appointed by the director of the U. S. Veterans Bureau to study the residual effects of war gas expects to complete its studies of chlorine gassing by the first of the year.

The board which held its first meeting March 9, 1926, is composed of Dr. Allen K. Krause, member of the group on investigation and research of the medical council of the U. S. Veterans Bureau and associate professor of medicine at Johns Hopkins University; Lt.-Col. Harry L. Gilchrist, M.C., U. S. A., chief of research division, chemical warfare service, U. S. A., and Dr. Philip B. Matz, chief, medical research sub-division, U. S. Veterans Bureau.

Records show that approximately 70,000 men were gas casualties of varying degrees of severity during the war, 1843 of which were from chlorine gas. The war department has made an investigation of the immediate effects of chlorine gassing in over 800 cases, and the present study by the Veterans Bureau is expected to develop important information pertaining to the residual effects of this gas.

Upon completion of their investigation of chlorine gassing, the board will commence a survey of the cases resulting from phosgene, mustard and other gases.

PERSONAL MENTION

Dr. Arthur G. Plankers of the Mayo Clinic has become associated with the Dubuque Medical and Surgical Clinic. Dr. Plankers served with the Mayo Clinic and the University of Minnesota Base Hospital Unit in France.

Dr. Jesse L. Cook, formerly of Oxford Junction, has located at Wheatland for the practice of medicine.

MARRIAGES

Dr. A. H. McCraight of Fort Dodge and Mrs. Mabel Stine Johnston, also of Fort Dodge, were married at the Congregational Church, Fort Dodge, September 4, 1926.

OBITUARY

Dr. James A. Denney, formerly with the medical department of the Burlington road, died at Santa Monica, California, July 27, 1926. Dr. Denney was born near Fort Recovery, Ohio, August 22, 1857. He became connected with the medical department of the Burlington road at Galesburg, Illinois, in

May, 1891, was appointed medical director, August 1, 1895, and continued as such until ill health compelled his retirement from active service in April, 1924.

Dr. Denney was fitted by temperament to successfully deal with personalities of such wide differences as may be expected to be found in a corporation requiring the services of some fifty thousand people. He had a kindly manner, was considerate with all irrespective of rank, and freely gave of his time and ability, both professionally and in advising those who had been unfortunate.

Throughout thirty-five years of intimate business and personal relations with Dr. Denney, there was never a question as to his personal integrity, high conception of duty, and desire to serve and render full justice to his fellow men.

The medical profession of North America will note with deep regret the death of Professor J. G. Adami, formerly of McGill University and recently vice-chancellor of the University of Liverpool, which occurred September 29, at the age of sixty-five years. Many of our members will recall the scholarly address delivered by Prof. Adami before the Iowa University some years ago. For the past two years he has been in failing health.

Prof. Adami was educated in Manchester at Owens College and Chrits' College, Cambridge. After attending important schools on the continent he returned to Cambridge where he became demonstrator of pathology, and was elected Fellow of Jesus College. At the age of thirty years he accepted the position of Strathcoma professor of pathology and bacteriology at McGill University, Montreal. During the war Adami served in the Canadian army medical corps, and was eventually made assistant director of medical services, and became the historical recorder of the medical services of the Canadian expeditionary forces.

Dr. H. C. Bone of Grand River died suddenly at his home September 15, 1926. Dr. Bone was a well known physician in southern Iowa.

BOOK REVIEWS

YOUNG'S PRACTICE OF UROLOGY

Based on a Study of 12,500 Cases by Hugh H. Young, M.D. and David M. Davis, M.D., Johns Hopkins University, with the Collaboration of Franklin P. Johnston. Two Octavo Volumes Totaling 1484 Pages with 1003 Illustrations, 20 Being Color Plates by William P. Didusch. W. B. Saunders Co., 1926. Price Per Set, Cloth $25 Net.

This magnificent work by a master in urologic surgery seems to have reached the highest point in this branch of surgical work. Dr. Young, in the preface asks "Why another Urology?" and mentions the list of works of recent production and then presents his idea of why there is room for another work of this character.

Dr. Young has been so long before the medical public in his special branch that the profession will be quite willing to accept his reasons why his vast experience should be given in the form of a beautifully illustrated work.

We need not enter upon a detailed account of the various subjects treated because it may be assumed that the author would begin with the "Physiology and Pathology of Micturition" and end with the "Operative Technique of the Surgery of the Genito Urinary Tract".

Dr. Young has been one of the most active workers in developing surgery of the bladder and prostate and we have come to look upon his word as the last word in this branch of surgery. Not only has the author presented the classic but the publishers have contributed their part by high class mechanical work and the employment of heavy stock which makes it possible to produce high artistic illustrations. In looking over the text we are impressed with the numerous illustrations which greatly helps us in following the description of methods employed in examination and treatment.

To the special surgeon and the general surgeon who engages in this class of practice we would advise adding this important work to his library for frequent and authoritative reference.

A TEXT-BOOK OF UROLOGY

By Oswald Swinney Lowsley, A.B., M.D., F.A.C.S., and Thomas Joseph Kirwin, Ph.G., B.S., M.A., M.D., of the Department of Urology (James Buchanan Brady Foundation) of the New York Hospital, Etc., Etc. Illustrated with 233 Engravings and 13 Plates. Lea & Febiger, Philadelphia and New York, 1926. Price $10.

The subject of Urology is being intensively studied by groups of our foremost medical men. This shows how important the study of Urology is and what long steps the profession has taken in the last few years in developing a scientific method of treating diseases which we knew little about only a few years ago. The number of works that have recently been published on this subject leads us to scrutinize new works with considerable care.

We are informed that this text-book is based upon eighteen years of intensive study including laboratory, research and clinical experiences in the hospital and private practice. Examination of this work justifies the claim of the authors in the careful study they have been prosecuting in relation to the subject of Urology. This book of 700 pages covers the ground in a concise and logical manner and will appeal to the profession in that economy of space and economy of cost has been carefully considered.

The subject matter of several recent books bears a close relation to each other but there is some difference in presentation and arrangement which

will lead the student of Urology to appreciate the importance of familiarizing himself with the views of these several writers. As it seems to us this new work will be accepted with an appreciation of what the authors have done in bringing to us a well conceived work on this important subject.

A MANUAL OF CLINICAL METHODS

By Clyde Lottridge Cummer, Ph.B., M.D., Associate Professor of Clinical Pathology, School of Medicine, Western Reserve University, Etc., Cleveland Ohio. Published by Lea and Febiger, Philadelphia and New York. Second Edition, 1926. Price $6.50.

This work, presented in its second edition, is of a type to commend itself at first glance, on account of its moderate size and good letterpress. The clear concise style in which the subject matter is handled, with apparent thorough familiarity with all the various tests and their modifications, gives the reader such a good impression as to inspire confidence in the results obtained through the author's methods of procedure. A valuable aid to the performance of the tests is found in the short, clear resume set down at the end of the more elaborate discussion, giving the steps in their order. The illustrations are new and clear, and the plates noteworthy in the fidelity of their colors, with relation to those actually seen in the laboratory. The book has been somewhat criticized in a recent review, because no great space was devoted to the Kahn test but it would hardly seem advisable to overemphasize in a book intended in great part for the use of students, a modification which, however highly lauded it may be in certain quarters, or into what it may finally develop as a substitute for the older complement fixation test, is as yet, not definitely fixed in its position. Certainly, the author is to be commended for good judgment in this as in other subjects treated.—H. R. R.

OPERATIVE CYSTOSCOPY

By E. Canny Ryall, F.R.C.S., Founder and Senior Surgeon at All Saints' Hospital for Genito-Urinary Diseases at London; with 115 Prints Containing 670 Original Illustrations of Which 528 Are Colored. C. V. Mosby Co., St. Louis. Price $25.

In the preface of this magnificent work the author states that "a good many years ago self-tuition was the only possibility. This book embodies the results of long and progressive work and is published in the hope that it may prove useful to others and stimulate younger readers".

On the subject of Anesthesia the writer advocates the use of local anesthesia as a means of making operative cystoscopy as nearly painless as possible.

The second chapter relates to Ureteric Calculi and refers in the text to the numerous illustrations employed.

Chapter three refers to Vesical Calculi in which the author states, "the use of the cystoscope in combination with the lithotrite is a great advance on the older methods in which the stone is grasped and crushed blindly, the sense of touch being the only guide", and the technique employed is set forth by numerous illustrations. In addition to the consideration of Stone the author takes up Growths in the Bladder and presents a rather extensive technique in diathermy treatment.

Considerable space is given to questions relating to the prostate, then follows numerous illustrations which include the greater part of the work.

The plan of this work is a short text setting forth a discussion of the methods of examination and the purpose to be accomplished. This is included in some forty-six pages while the body of the work is made up of illustrations on one page and a descriptive text on the opposite page. The book is printed on heavy paper so as to give a better development of the illustrations. It is something like an atlas showing the conditions of the territory explored and a sufficient text to indicate the full meaning of each of the maps, as it were.

Twenty-five dollars seems a large price for a single volume but when we consider the expense of preparing the illustrations it can be seen that the price is not excessive. We can easily discover the advantages of such work to the genito-urinary surgeon.

COLLECTED PAPERS

By the Staff of the Henry Ford Hospital; First Series, 1915-1925; With 151 Illustrations and 42 Charts; Paul B. Hoeber, Inc., New York City. Price $8.

It has become quite the custom recently for the large hospitals of this country to publish the contributions of its staff in book form.

The Foreword, which includes the historical of special contributions to this class of work, is by Frank J. Sloden.

For the benefit of those interested in the much discussed Ford Hospital we will present the Hospital Organization, members of the Henry Ford Hospital Corporation: Henry Ford, Clara J. Ford, Edsel B. Ford, Eleanor C. Ford, Ernest G. Liebold, Frank J. Sladen, M.D., Roy D. McClure, M.D. Board of trustees: Henry Ford, Edsel B. Ford, Clara J. Ford, Eleanor C. Ford; Henry Ford, president; Edsel B. Ford, vice-president, secretary and treasurer.

Staff of Henry Ford Hospital, October 1, 1925:

Frank J. Sladen, M.D., physician in chief.

Division of Cardio-Respiratory Diseases; F. Janny Smith, M.D., physician in charge.

Division of Dermatology; Frank R. Menagh, M.D., physician in charge.

Division of Gastro-Enterology; John G. Mateer, physician in charge.

Division of Metabolic Diseases; Daniel P. Foster, physician in charge.

Division of Neuro-Psychiatry; Thomas J. Heldt, M.D., physician in charge.

Division of Pediatrics; Ervin MacQuarrie, M.D., physician in charge.

Department of Surgery; Roy D. McClure, M.D., surgeon in charge.

Division of Gynecology; Jean P. Pratt, M.D., physician in charge.

Division of Ophthalmo-Oto-Laryngology; Wendell F. Garretson, M.D., surgeon in charge.

Division of Urology; John K. Ormond, M.D., surgeon in charge.

Division of Orthopedic Surgery; James W. Peabody, M.D.

Department of Obstetrics; Everett D. Plass, M.D., obstetrician in chief.

Department of Laboratories; Frank W. Hartman, M.D., pathologist in charge of laboratory.

Department of Roentgenology; Edward P. Doub.

Including associate physicians and surgeons and interns there are in addition to the names already presented ninety-three physicians on the staff.

We will only give space to a few of the contributions that make up this interesting volume.

Observation on Blood Phosphates as Related to Carbohydrates Metabolism, by A. Bolliger, Ph.D. and F. W. Hartman, M.D. These gentlemen present a contribution of the Curve of Inorganic Blood Phosphates During Sugar Tolerance Tests, significant in diagnosis and prognosis.

Another contribution is by Normal E. Clarke, M.D., Paroxysmal Auricular Fibrillation and Cardiac Syncope.

Tannic Acid in the Treatment of Burns is presented by Edward C. Davidson, M.D. This contribution is accompanied with several illustrations. This is a rather extended contribution and the writer relates a number of conclusions, the first of which is, "the preliminary treatment of burns with tannic acid compresses followed by exposure to air lessens toxemia".

Organic Hour-Glass Stomach with Some Reference to Its Surgical Treatment, by Howard P. Doub, M.D.

Another paper of considerable importance appears under the following title: The Role of Ligamentous Calcification in Lower Back Pain, by Howard P. Doub, M.D. In recent years ligamentous calcification has been extensively investigated as the cause of back pain following injury. Painful condition of the back has been a prolific source of litigation in the alleged injuries to the back and many claims which were at one time thought to be malingering are now found to be due to ligamentis calcification as determined by x-ray examination. This article prepared by Dr. Doub is interesting and important in investigations of back pains which are often assigned to injuries when as a matter of fact they were due to a disease.

Dr. Thomas J. Heldt presents a paper on The Psychoneuroses including some notes as to definition and treatment.

Space will not permit indulging in a further consideration of the value of papers that have been presented in this volume. Most of the contributions have been published in important medical journals and appear in this volume as reprints. The book is arranged very much in accordance with the plan adopted by the Mayo Clinic. This volume of 634 pages presents many very important discussions.

OLD AND NEW VIEWPOINTS IN PSYCHOLOGY

By Knight Dunlap, Professor of Experimental Psychology in Johns Hopkins University.

This volume comprises five lectures or talks by Dr. Dunlap at various times, now reprinted in convenient form.

In the first chapter, on Mental Measurements, Dr. Dunlap points out at the beginning, that this term really comprises experimental research in individual psychology together with the routine application of measures and consists of three parts, the working out of tests which can be shown as useful, the bringing of these tests into some degree of standardization, and lastly, the application of the tests and their interpretation. As all these factors are of importance, it follows logically that the work in each of these three elements of the problem must, to be of value, be the work of those persons qualified along these lines and not of those who have acquired a smattering of such knowledge through short courses or attempts at the application of the results of reading.

After tracing the development of the modern methods from their early beginnings, and deploring the false impressions created by some interpretations of such tests as the Alpha test in the army, as well as those conducted in some industrial plants by so-called psychologists Dr. Dunlap shows by what painstaking and thorough preparation, tests of mental acquisition and of capacity to learn and to advance may be developed and put to practical use. When mental measurement is placed upon a solid foundation of precise knowledge by trained workers, the author believes its use by such men in industrial plants, and in the problems of criminality and immigration will result in practical benefit.

Discussing next, Present Day Schools in Psychology, Dr. Dunlap speaks of the science of psychology as such, as having existed for only a short time, and shows how much of its early work came through psychological speculation by men prominent in other parts of the scientific field. Thence he goes on to mention various phases of psychological thought, introspectionalism, behaviorism, etc., leading up to a rather free criticism of the psychoanalysts. He pays attention to repression and the Freudian idea concerning it, only to condemn this doctrine as absurd and vicious.

A third chapter, on Psychological Factors in Spiritualism, will well repay the reader for the time

spent, as it is an unusually temperate and clear-eyed refutation of the ideas held even by some men prominent in other lines of human endeavor, who, as Dr. Dunlap says, have arrived at an age when they begin to think of what lies beyond this life, to long for some assurance of a future existence, and therefore to believe in phenomena presented to them as manifestations of such life beyond the grave. The author's point of view may be shown by quoting the final sentence—"The blight of spiritualism is to be combated primarily by education in simple facts of scientific psychology".

The two final talks, on The Psychology of the Comic, and Reading of Character, are of less importance possibly, but in the last named, as in the talk on Schools of Psychology, Dr. Dunlap shows his unrelenting and uncompromising attitude toward anything not founded on demonstrable scientific facts.—H. R. R.

A BIPOLAR THEORY OF LIVING PROCESSES

By George W. Crile, Edited by Amy F. Rowland. Cloth, Price $5. The Macmillan Company, New York, 1926.

It is uncommon to read a book containing a completely original concept. Dr. Crile, in this volume, presents a theory which, I believe is entirely new and original. The theory is based upon a wealth of experimental data collected in his laboratories since the inception of this work in 1898. His theory, in its essence, is that all living processes are electrical phenomena. The individual cell represents an electrical unit—a bipolar unit—with the acid nucleus as the positive electrode and the alkaline cytoplasm as the negative electrode. These cellular units are collected into larger units as organs in which the individual cells are interrelated by protoplasmic bridges maintaining the respective polarity of the units and circulating energy. He suggests that the difference between living and non-living matter is one of type of electrical force. In the former the force is dynamic while in the latter it is static. Having arrived at this basic concept Dr. Crile has attempted to correlate all vital activity with the theory. In this elaboration he is highly successful and carries his reader by easy steps from his basic theory into its application to the problem of the origin of life, the phenomenon of death, the production of disease and the genesis of cancer. One is captivated by the brilliance of the theory and swept along by the current of the author's orderly presentation of its rationality. He presents, in abstract, much of the experimental work upon which his theory is based—researches carefully conducted and of outstanding merit. Overwhelmed as one is with experimental proof it is not easy to establish the transition from proof to theory but a critical examination reveals many conjectures unproven and deductions assailable. That the theory is fascinating, that the presentation is scholarly, and that the contribution is scientific one cannot question, but that the theory is proven or can be proven may be doubted. The test of time and additional research will determine the truth or fallacy of the ingenious theory advanced in this volume by Dr. Crile. R. R. S.

THE SURGICAL CLINICS OF NORTH AMERICA

Volume 6; Number 2; 250 Pages With 73 Illustrations; Price Per Clinic Year, Paper $12, Cloth $16 Net. W. B. Saunders Co., 1926.

This is a San Francisco number and is a fair representation of the surgery of the Pacific Coast. This number is introduced by a clinic of Dr. Emmett Rixford, San Francisco hospital, on Fracture of the Patella, followed by a clinic of Dr. Frank W. Lynch, University of California hospital, on the Treatment of Squamous-Cell Epithelioma of the Cervix and another clinic by Dr. Howard C. Naffyiger on Cerebral Anemia and Surgical Risks. There are included in this number twenty different subjects including clinics at the various San Francisco hospitals. Space will not permit us to mention all of the clinics.

We find a rather full presentation of the subjects of Intrapleural Pneumolysis by Dr. Leo Elvesser. A rather full account is given of Artificial Pneumopharax in Cases of Tuberculosis of the Lungs. Four cases are presented in illustration of the paper presented by Dr. Elvesser. Dr. P. K. Gilman describes an instrument for locating and draining Hepatic Abscess. Dr. Leonard W. Ely of Stanford University hospital, presents an interesting discussion on Dupuytren's Contraction. Among the many causes mentioned for Dupuytren's Contraction, tight banadaging is not mentioned. This is an interesting fact when claims for malpractice are often based on the alleged tight bandaging.

Alice F. Maxwell, from the women's clinic, University of California hospital, presents a discussion on Inversion of the Uterus, which is particularly interesting. The last clinic we have space to consider is by Dr. Edwin I. Bartlett and Dr. C. Latimer Callander on Neck Dissection, illustrated by several excellent cuts.

BLOOD CHEMISTRY

Colorimetric Methods for the General Practitioner with Clinical Comments and Dietary Suggestions by Willard J. Stone, B.Sc., M.D., Pasadena, California; Attending Physician Los Angeles General Hospital; Introduction by George Dock, M.D., Pasadena, California; Second Edition Revised. Paul B. Hoeber, Inc., New York. Price $3.25.

Blood chemistry has so entered into various questions of diagnosis that Dr. Stone has attempted to condense our information on this subject in a book of 129 pages.

Chapter one is devoted to Suggestions and Blood Chemistry Work and begins with the colorimeter as

an instrument devised for the quantitative determination of circumstances which have developed color as a result of chemical reactions. For chemistry work the fasting state is desirable. We find a series of illustrations which gives the technique for this work.

Chapter two refers to the Preparation of Protein-Free Blood Filtrate Used in Determination of Non-Protein Nitrogen, Urea Nitrogen, Uric Acid, Preformed Creatinin; Total Creatinin, Sugar and Chlorides. Under this chapter is given a description of the methods of procedure. This chapter ends with Clinical Comments on Abnormal Retention of Non-Protein Nitrogen and Urea in the Blood.

Chapter three considers Uric Acid and Methods of Calculation and closes with Clinical Comments on Uric Acid Retention.

Chapter four presents Preformed Creatinin and closes with Chemical Comments on Blood Creatinin.

Chapter five presents the subject of Blood Sugar and the chapter closes with Clinical Comments on Blood Sugar.

Chapter six; Blood Chlorides.

Chapter seven; Blood Cholestrol and describes Solutions in the Determination of Blood Cholestrol.

Chapter eight; Total Nitrogen Determination in the Urin.

Chapter nine; Clinical Comments on the Diagnosis of Impaired Kidney Function.

Chapter ten; the Dietary Control of Disturbances of Metabolism.

Chapter eleven comments on the Diet in the Treatment of Diabetis Mellitus.

Each one of these several chapters at the close presents a resume of clinical comments. This is a highly technical work on Blood Chemistry.

DIPHTHERIA ANTITOXIN—THEN AND NOW

Some of our readers may recall the appearance of antidiphtheric serum in the pioneering antitoxin days, and the volume of the dose. It would do their hearts good to get a glimpse of the blue label antitoxin that Parke, Davis & Co. are now supplying—a practically water-white liquid in a syringe package of the latest design, the needle separately enclosed in a glass tube in such a manner that the shaft of it is not touched by the operator as he attaches it to the syringe.

And a dose of 10,000 units occupies no more space than 3000 units or less occupied in those early days.

Children still die of diphtheria—more's the pity, for a specific remedy is available. They die because the antitoxin is not given soon enough or in a dose large enough. Antitoxin is not a piece of magic, black or white, but an accurately measurable biologic agent; a 10,000-unit dose will neutralize a definite quantity of diphtheria toxin. It neutralizes the toxin by combining with it, and that's the end of it; it can do no more. Hence the necessity of an adequate dose before the patient is fatally poisoned.

Parke, Davis & Co. recently issued a booklet on the prophylaxis and treatment of diphtheria, and we are authorized to state that any physician can obtain a copy by writing to the firm for one—Parke, Davis & Co., Detroit, Michigan.

PROPAGANDA FOR REFORM

Hind's Honey and Almond Cream—According to an analysis reported in 1914, Hind's Honey and Almond Cream is essentially an emulsion containing alcohol, 7.28 per cent.; glycerin, 5.79 per cent.; partly saponified beeswax, 5.98 per cent.; crystallized borax, 1.49 per cent.; perfumed with oil of bitter almonds. (Jour. A. M. A., August 15, 1925, p. 539.)

Tuberculin in Tuberculous Adenitis—Tuberculin seems to be indicated when the disease is strictly localized, and especially in involvement of the cervical lymph gland. Its administration is carried on in the same way as in the tuberculin treatment for other purposes with doses that produce a slight local reaction but fall short of a general one. (Jour. A. M. A., August 15, 1925, p. 539.)

The Parathyroid Hormone.—The recently reported studies make it more than likely that suitably prepared parathyroid extracts contain a substance or substances that will afford complete replacement therapy in the case of the totally parathyroidectomized dog. The methods thus far developed indicate that any extract of fresh ox gland that has been made by a process of weak acid hydrolysis and is sufficiently concentrated contains more or less of the active principle. It has been proposed to use as a provisional unit of potency one one-hundredth of the amount of extract that will produce an average increase of 5 mg. in the content of calcium in the blood serum of the normal dog of approximately 20 kg. of body weight over a period of 15 hours. There should be no haste in a possible human application of the parathyroid hormone. Injection of even very small amounts frequently repeated have invariably proved fatal to animals when the injections were continued.—(Jour. A. M. A., August 8, 1925, p. 441.)

The Nutroids Fraud—Nutroids has been marketed as "a safe obesity cure" by one R. Lincoln Graham. It was claimed (1) that Graham was "an eminent physician, a stomach specialist who has obtained exceptional honors in his profession", (2) that he had discovered "the real cause of fat", (3) that "obesity is brought about by an over-development of alcohol in the digestive tract", and (4) that Graham had discovered the method of preventing the over-development of alcohol by the administration of the product he called Nutroids. The scheme was essentially a mail order fraud. More recently the nostrum was also sold through drug stores. In due course the postal authorities got round to Graham and his "Nutroids" and secured an agreement that Nutroids would not be sold through the mails. Graham can no longer swindle the public through the mails; if done at all, it must be done through the agency of such retail druggists as are willing to cater to this form of quackery.—(Jour. A. M. A., August 15, 1925, p. 522.)

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